

Events by Day: November 4

09:30 ~ 21:00 On-Site Registration

Each participant will receive a Welcome Pack upon registration. It contains the following items:

- Individual Envelope: the name and the registration number will appear on the envelope, which contains all individualized materials such as Badge, Meal Coupons, Closing Banquet Invitation, etc.
- If you have paid the registration fee before October 1, a receipt of the registration fee will be contained in the Individual Envelope.
- Programme Book and Abstract Book
- Promotional materials

Notes:

- There will be a signboard near the Registration Desk, on which you can find the Room Number of the Conference Secretariat and some important messages.
- Speakers of the plenary lectures, invited talks and regular oral presentations are kindly asked to copy their PPT-format electronic files into the computer at the Registration Desk upon registration.
- The staffs at the Registration Desk will write a receipt for participants who pay the registration fee on-site.
提前交费的代表请在报到处领取发票。
会议将为现场交费的境内代表开具一张临时收据，正式报销发票将于会后邮寄。
- 境内代表请注意：如果您需要会议报销证明，请从会议网站上下载打印后到会议秘书处盖章（会议秘书处不提供打印服务）。
- No meals for November 4 will be arranged by the Conference. Participants should have the lunch and the supper by themselves. There are several dining rooms located in the lobby of the Hotel and near the Hotel.
11月4日当天会议不安排午餐和晚餐，请各位代表自行解决。
- 旅行社将在酒店大堂设服务台为与会代表提供各类服务，包括：临时安排住宿、会后旅游、会议期间旅游等。服务时间为 9:30 ~ 21:00。
- The Proceedings of CICC-10 will be published in *Key Engineering Materials* by TTP. If you plan to publish the full-length manuscript in the Proceedings, please send an e-mail, before November 15, to ccs-cicc@vip.163.com to ask for an account for upload the manuscript on line. The deadline for manuscript submission is November 30, 2017.
计划在会议论文集上发表论文的代表如果尚未获得在线提交论文全文的账号，请务必于 11 月 15 日前给 ccs-cicc@vip.163.com 发送一个电子邮件，说明论文编号和提交论文的作者的电子邮件地址。提交论文全文的截止日期是 2017 年 11 月 30 日。

Events by Day: November 5

08:00 Taking bus to Nanchang School of Administration

Please take the shuttle bus in the hotel to take part in the Opening Ceremony and the Plenary Lectures, which will held at Nanchang School of Administration (南昌市行政学院).

Please keep in mind that **the last bus will leave at 08:15.**

09:00 ~ 09:30 Opening Ceremony

See Page XX for details.

10:00 ~ 12:00 Plenary Lectures

See Page XX for details.

12:00 ~ 13:20 Lunch

13:30 ~ 17:40 Plenary Lectures

See Page XX for details.

18:00 ~ 19:00 Supper

19:00 Return to Hotel

After the supper, there will be buses to take all the participants to Crown Plaze Nanchang Riverside.

The last bus will leave at 19:20.

Events by Day: November 6

08:00 ~ 12:00 Oral and poster presentations

参加境内学生口头报告竞赛预赛的学生代表请准时到达鑫顺翔十九楼会场，并全程听取所在会场其他参赛选手的报告。如果某位选手缺席，报告时间将顺序前移。

12:00 ~ 13:20 Lunch

The dinner is arranged at Banquet Hall which is located near the meeting rooms (see Page XX). Please give the meal coupon to the waiter when you enter the hall. **Please note that the meal coupon will be expired at 13:20.**

14:00 ~ 18:00 Oral and poster presentations

19:30 ~ 22:00 Special Lecture

Note: Prof. Rosei (INRS, Canada) will give a special lecture entitled "Mentorship for Young Scientists: Developing Scientific Survival Skills". See Page XX.

19:30 Riedel 教授在 6 号会议室做关于青年科研工作者科研生存能力培养方面的专题报告。

会议征文

<http://www.mse-cn.com/TEIM/index.html> (将于 2017 年底更新)

由中国硅酸盐学会测试技术分会主办的**第九届无机材料结构、性能及测试表征技术研讨会 (TEIM2018)** 将于 2018 年 8 日在湖北恩施市召开。会议欢迎以下主题的论文：

- (A) 测试表征技术：理论、方法、进展、应用、设备、标准.....
- (B) 低维纳米无机材料：结构、性能及其测试表征
- (C) 先进陶瓷：结构、性能及其测试表征
- (D) 耐火材料：结构、性能及其测试表征
- (E) 传统陶瓷：结构、性能及其测试表征
- (F) 无机玻璃：结构、性能及其测试表征
- (G) 建筑材料：结构、性能及其测试表征
- (H) 其他无机材料：结构、性能及其测试表征

向 TEIM2018 提交摘要的截止日期是 2018 年 6 月 1 日。

Events by Day: November 7

08:00 ~ 12:00 Oral and poster presentations

Note: At 10:30, Prof. Riedel (Technical University of Darmstadt, Germany) will give a special lecture entitled "Writing and Publication of Scientific Papers". See Page XX.

10:30 Riedel 教授在 2 号会议室做关于科技论文写作与发表方面的专题报告。

12:00 ~ 13:20 Lunch

The dinner is arranged at Banquet Hall which is located near the meeting rooms (see Page XX). Please give the meal coupon to the waiter when you enter the hall. **Please note that the meal coupon will be expired at 13:20.**

14:00 ~ 18:00 Oral and poster presentations

Note: At 16:30, Prof. Fahrenholtz (Editor-in-Chief, Journal of the American Ceramic Society) will give a special lecture entitled "Publishing Papers in American Ceramic Society Journals". See Page XX.

16:30 美国陶瓷学会杂志主编 Fahrenholtz 教授在 2 号会议室做关于如何在美国陶瓷学会主办的期刊上发表论文的专题报告。

18:30 ~ 20:00 Closing Banquet

The Closing Banquet is arranged at Banquet Hall which is located near the meeting rooms (see Page XX). Please give the meal coupon to the waiter when you enter the hall.

Guidelines for Invited Talks and Oral Presentations

- Please confirm the date/time/room of your presentation in the program (an index is given in Page XX).
- Presenting authors of invited talks and oral presentations are kindly asked to prepare a PPT-format electronic file for your presentation and copy the file into the computer at the Registration Desk before 20:00, November 5.
- On the day of your presentation, please go to the session room at least 10 minutes before your presentation.
- The time allotted for each invited lecture is 24 min (20 min for the presentation and 4 min for questions and answers). The time allotted for each regular oral presentation is 19 min (15 min for the presentation and 4 min for questions and answers).
- In all session room, the speakers must use English.
- Each session room will be equipped with a notebook PC and a PC projector, which will be operated by the speaker.

Guidelines for Poster Presentations

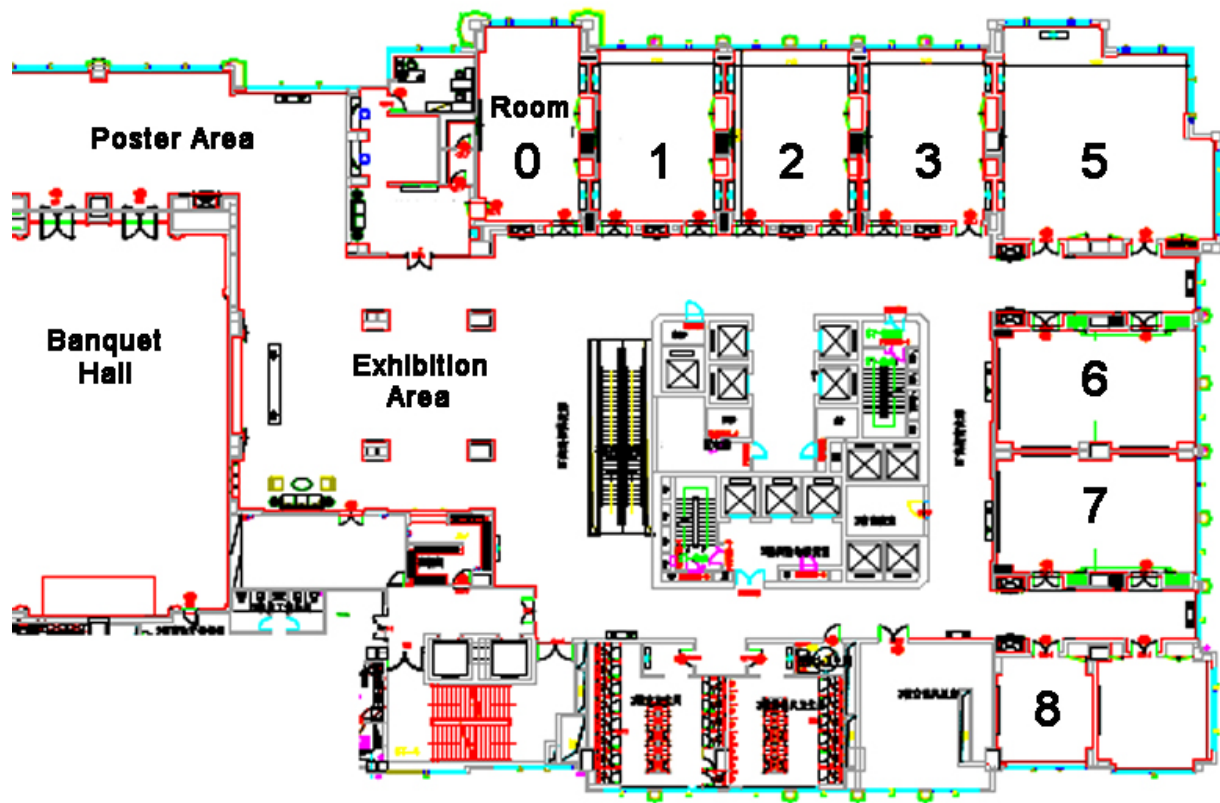
- Please confirm your presentation schedule (date/time/room) in the program.
- Posters should be put on the panels between 07:50 and 08:20 (for presentations arranged in morning of November 6 or 7) or between 13:20 and 13:50 (for presentations arranged in the afternoon of November 6 or 7). Please remove your posters between 11:50 and 12:00 (for morning) or between 17:30 and 17:50 (for afternoon). Adhesive tapes will be available in the Service Desk in the Session Room.
- One panel (100 cm wide and 200 cm high) per paper will be provided in the session room. Each panel will be assigned a number from 1 to about 80, and this number will be put on the top of each panel.
- In the Programme Schedule, the poster presentations were listed in the following form

[5] (C1-001) Lifetime prediction of all-ceramic dental crowns: a three-dimensional finite element analysis J. Han (<i>The Fourth Military Medical University, China</i>)
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The number given in the square bracket before the presentation ID is the number of the panel allotted to your poster presentation (for the example given above, the panel number is 5) and the presentation ID is C1-001. Please put on your poster on the panel with the number corresponding to your presentation.

- Poster discussion will be held between 10:30 and 11:50 or between 16:20 and 17:40 for each session. During the period of poster discussion, the presenting author should spend at least 20 minutes in front of his poster panel to answer the possible questions from the participants. The presenting author of each paper should leave a message on their poster panel to inform the participants about the time when you will be in front of your panel to discuss with them.

Map of the Conference Area



Morning, November 5

(09:00 ~ 09:30)

Opening Ceremony

Chair: W. Pan (*Tsinghua University, China*)

(10:00 ~ 12:00)

Plenary Lectures

Chair: Kunihiro KOUMOTO (*Nagoya University, Japan*)

- 10:00 PL-007 Polymer-derived SiBCN-based ceramics: 25 years of research**
R. Riedel (*Technische Universität Darmstadt, Germany*)
- 10:40 PL-001 Additive manufacturing of ceramics using inorganic polymers**
P. Colombo (*University of Padova, Italy; The Pennsylvania State University, USA; University College London, UK*)
- 11:20 PL-008 Niobate-based lead-free piezoelectric ceramics**
J.F. Li (*Tsinghua University, China*)
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Afternoon, November 5

(13:30 ~ 15:30)

Plenary Lectures

Chair: Y.C. Zhou (*Aerospace Research Institute of Mater. Process. Technol., China*)

- 13:30 PL-005 Additive manufacturing of ceramics**
T. Ohji (*National Institute of Advanced Industrial Science and Technology, Japan*)
- 14:10 PL-002 Rippllocations: a new micromechanism in the deformation of layered solids**
M.W. Barsoum (*Drexel University, USA*)
- 14:50 PL-006 New paradigms in ion-beam modification of ceramics**
W.J. Weber^{1,2*}, H.Z. Xue¹, E. Zarkadoula², R. Sachan², C. Trautmann³ and Y.W. Zhang² (¹*University of Tennessee, USA*; ²*Oak Ridge National Laboratory, USA*; ³*GSI Helmholtzzentrum für Schwerionenforschung GmbH, Germany*)

(15:40 ~ 17:40)

Plenary Lectures

Chair: Ik Jin KIM (*Hanseo University, Korea*)

- 15:40 PL-003 Multifunctional materials for solar technologies**
F. Rosei (*INRS, Canada*)
- 16:20 PL-004 Accurate structural studies of functional materials using synchrotron radiation X-ray powder diffraction**
E. Nishibori (*University of Tsukuba, Japan*)
- 17:00 PL-009 Advances and prospects of ferroelectric oxides**
Y. Wang (*Nanchang University, China*)

Programme Schedule

Morning, November 6 ♦ Meeting Room 0

(08:00 ~ 09:45)

Geopolymer and Geopolymer Developed Ceramics & Composites

Chair: D.C. Jia (*Harbin Institute of Technology, China*)

- 08:00** **Welcome address**
 D.C. Jia (*Harbin Institute of Technology, China*)
- 08:05** **SF1-001** **A study on improvement geopolymer fabrication process**
Invited
 T.W. Cheng, T.C. Li, T.K. Hu, W.H. Lee and Y.C. Ding (*National Taipei University of Technology, Taiwan*)
- 08:30** **SF2-001** **Ceramic formation from geopolymer and geopolymer based composites**
Invited
 P.G. He (*Harbin Institute of Technology, China*)
- 08:55** **SF4-002** **Applicability of geopolymers as thermal insulating and fire resistant structural materials**
Invited
 Y.M. Liew, C.Y. Heah, N.Y. Sing, M.M.A.B. Abdullah and K. Hussin (*Universiti Malaysia Perlis, Malaysia*)
- 09:20** **SF3-002** **Porous metakaolin geopolymer/alginate/chitosan hybrid spheres for Pb(II) removal from aqueous wastewater**
Invited
 D.M. Ren, S.T. Liu, C.J. Yan and P. Duan (*China University of Geosciences, Wuhan, China*)

(10:00 ~ 11:50)

Geopolymer and Geopolymer Developed Ceramics & Composites

Chair: T.W. Cheng (*National Taipei University of Technology, Taiwan*)

- 10:00** **SF3-003** **Development and prospects of geopolymer and its matrix composites and geopolymer developed ceramic matrix composites**
Invited
 D.C. Jia, P.G. He and J.K. Yuan (*Harbin Institute of Technology, China*)
- 10:25** **SF4-003** **A novel waterproof coating prepared by geopolymer incorporated with polydimethyl siloxane**
Invited
 X.S. Lv, J. Sun, P. Guo, Z.H. Liu and X.M. Cui (*Guangxi University, China*)
- 10:50** **SF2-101** **Preparation and properties of Fe₃O₄/graphene reinforced geopolymer composites**
 L.Y. Jia, P.G. He, D.C. Jia, J.K. Yuan, Z.H. Yang, X.M. Duan and Y. Zho (*Harbin Institute of Technology, China*)
- 11:10** **SF4-101** **Preparation and performances of geopolymer-based plant fiber composites**
 S.J. Wei, W.L. Lu, J.L. Tan and G.J. Zheng (*Guangxi Teachers Education University, China*)
- 11:30** **SF6-101** **Solidification of radionuclide ion exchange resins**
 W.H. Lee, S.W. Tsao, T.W. Cheng and Y.C. Ding (*National Taipei University of Technology, Taiwan*)

Programme Schedule

Morning, November 6 ♦ Meeting Room 1

(08:00 ~ 09:50)

Ceramics and Composites for Structural Applications

Chair: J.H. Ouyang (*Harbin Institute of Technology, China*)

- 08:00 B1-001 **Evaluation of densification kinetics during isothermal sintering of zirconia**
Invited B.N. Kim (*National Institute for Materials Science, Japan*)
- 08:25 B1-002 **Single crystal α -alumina fibers for use in a new generation of composite materials**
Invited V. Valcarcel (*Neoker, S.L., Spain*)
- 08:50 B1-105 **ZTA composites with nano-TiC inclusions derived from hybrid oxide/nonoxide particles**
W. Pyda¹, A. Golonka¹, N. Moskała¹, G. Grabowski¹ and Piotr Putyra² (*¹AGH University of Science and Technology, Poland; ²The Institute of Advanced Manufacturing Technology, Poland*)
- 09:10 B1-115 **Study on preparation of zirconium sol by precipitation method**
L. Li, Y.Y. Song and F.T. Liu (*University of Jinan, China*)
- 09:30 B1-125 **In situ fabrication and microstructure of Al₂O₃-ZrO₂ eutectic ceramics by a novel pulse discharge plasma assisted melting technique**
Z.G. Wang, A. Henniche, Y.H. Ma, Y.J. Wang, Z.G. Liu and J.H. Ouyang (*Harbin Institute of Technology, China*)

(10:00 ~ 12:00)

Ceramics and Composites for Structural Applications

Chair: B.N. Kim (*National Institute for Materials Science, Japan*)

- 10:00 B1-128 **Performance regulation and surface tribology design of alumina ceramic composites**
H.Z. Fan, Y.S. Zhang, J.J. Song, T.C. Hu and L.T. Hu (*Lanzhou Institute of Chemical Physics, CAS, China*)
- 10:20 B1-129 **Optimization design of structures of alumina/graphite laminated self-lubricated composites**
J.J. Song, Y.S. Zhang, B.F. Qin, H.Z. Fan, Y.F. Su, X.F. Jiang and L.T. Hu (*Lanzhou Institute of Chemical Physics, CAS, China*)
- 10:40 B1-130 **Fabrication and high-temperature tribological properties of self-lubricating composites incorporated with SrCrO₄ or BaCrO₄**
J.H. Ouyang, Z.G. Liu, F. Liu, Y.M. Wang and Y.J. Wang (*Harbin Institute of Technology, China*)
- 11:00 B1-137 **Preparation of Gd₂Zr₂O₇ transparent nanograin ceramic under high pressure and low temperature**
Z.Y. Huang, J.R. Deng, J.Q. Qi and T.C. Lu (*Sichuan University, China*)
- 11:20 B5-103 **Effect of SiC_p addition on the microstructure and mechanical properties of ZTA ceramics by microwave sintering**
Y.Q. Chen^{1,2}, Y.X. Zhang², G.Q. Liu², B.B. Fan^{1,2} and H.X. Li^{1,2} (*¹Zhengzhou Univ., China ; ²Sinosteel Luoyang Inst. Refractories Research Co., Ltd., China*)
- 11:40 B5-101 **Low-thermal expansion of Ca_{1-x}Ba_xZr₄(PO₄)₆ ceramics**
Y.Y. Song¹, Y.Y. Zhou¹, H.Z. Xu², R.X. Liu² and F.T. Liu¹ (*¹Univ. of Jinan, China; ²Shandong Industrial Ceramics Research and Design Institute Co., Ltd., China*)

Morning, November 6 ♦ Meeting Room 2

(08:00 ~ 09:45)

Advanced Materials for Next Generation Nuclear Energy

Chair: G.J. Zhang (*Donghua University, China*)

- 08:00 Welcome address
 G.J. Zhang (*Donghua University, China*)
- 08:05 SC1-002 Recent materials development efforts for general atomics' energy multiplier
 Invited module (EM²) reactor, a gas cooled fast spectrum reactor
 C.P. Shih, H. Khalifa, G. Jacobsen, K. Shapovalov, E. Song and C. Deck
 (*General Atomics, USA*)
- 08:30 SC2-001 Complex oxide ceramics for HLW immobilization
 Invited Y.H. Li (*Lanzhou University, China*)
- 08:55 SC3-002 Heavy-ion irradiation effects on U₃O₈ incorporated Gd₂Zr₂O₇ waste forms
 Invited X.R. Lu¹, X.Y. Shu¹, S.Z. Chen¹, K.B. Zhang¹, F.T. Chi¹, H.B. Zhang², D.D.
 Shao³ and X.L. Mao¹ (¹*Southwest Univ. Sci. Technol., China*; ²*China Academy of*
 Engineering Physics, China; ³*Institute of Plasma Physics, CAS, China*)
- 09:20 SC1-003 Flash sintering of difficult-to-densify ceramics for nuclear application
 Invited J. Zou¹, S. Grasso², M. Reece² and J. Binner¹ (¹*University of Birmingham, UK*;
 ²*Queen Mary University of London, UK*)

(10:00 ~ 12:00)

Advanced Materials for Next Generation Nuclear Energy

Chair: J. Zou (*University of Birmingham, UK*)

- 10:00 SC1-104 "Reactive flash sintering" of pyrochlore materials as a high level wastefrom
 candidate
 C. Xu (*Chinese Academy of Engineering Physics, China*)
- 10:20 SC4-102 On the thermal compatibility of zirconium carbides as the buffer-layer in the
 integrated ceramic ATF coating system
 L.N. Chen, Y.M. Lei, J. Zhang and J.Y. Wang (*Institute of Metal Research, CAS,*
 China)
- 10:40 SC7-102 Phase composition, morphology and corrosion resistance of plasma electrolytic
 oxidation coatings formed on Zr-4 alloy
 Y. Wang, H.B. Zhang and S.M. Peng (*CAEP, China*)
- 11:00 SC6-101 Theoretical calculations on the adhesion, stability, electronic structure, and H/He
 trapping behavior of Zr-ZrC interface
 C.H. Xu, S.L. Hu and H.B. Zhang (*CAEP, China*)
- 11:20 SC4-101 Influence of Al content on mechanical properties and oxidation behavior of
 Zr-Al-C solid solution coatings with application in ATFs
 Y.M. Lei^{1,2}, L.N. Chen^{1,2}, J. Zhang¹ and J.Y. Wang¹ (¹*Institute of Metal Research,*
 CAS, China; ²*University of Science and Technology of China, China*)
- 11:40 SC1-106 Mechanical property evaluation of zirconium nitride ceramics after irradiation
 by 4 MeV Au ions
 S. Robertson¹, S. Doak¹, H.Z. Wu¹ and G.J. Zhang² (¹*Loughborough University,*
 UK; ²*Donghua University, China*)

Programme Schedule

Morning, November 6 ♦ Meeting Room 5

(08:00 ~ 09:45)

UHTC & MAX Phase Workshop 2017

Chair: G. Hilmas (*Missouri University of Science and Technology, USA*)

- 08:00 **Welcome address**
Y.C. Zhou (*Aerospace Research Institute of Mater. Process. Technol., China*)
- 08:05 SB3-003 **Damage tolerant ceramics with nanolaminated structures: from MAX phases to MAB phases**
Invited Y.C. Zhou (*Aerospace Research Institute of Mater. Process. Technol., China*)
- 08:30 SB3-002 **Ceramics and the spontaneous metal whisker growth**
Invited Z.M. Sun (*Southeast University, China*)
- 08:55 SB3-004 **Recent advances in MAX phases solid solutions**
Invited T. Cabioc'h (*Université de Poitiers, France*)
- 09:20 SB4-002 **Ti₃AuC₂, Ti₃Au₂C₂ and Ti₃IrC₂ by noble-metal substitution reaction in Ti₃SiC₂**
Invited P. Eklund (*Linköping University, Sweden*)

(10:00 ~ 11:50)

UHTC & MAX Phase Workshop 2017

Chair: Z.M. Sun (*Southeast University, China*)

- 10:00 SB3-005 **MAX phases composites for high temperature applications**
Invited J. Gonzalez-Julian, O. Guillon and R. Vassen (*Forschungszentrum Jülich GmbH, Germany*)
- 10:25 SB3-006 **New ternary layered ceramics**
Invited C.F. Hu (*Southwest Jiaotong University, China*)
- 10:50 B3-104 **High performs of TiC_x-Ni₃(Al,Ti)/Ni composites synthesized from Ni alloy and Ti₃AlC₂ powders**
Z.Y. Huang, W.Q. Hu, H.X. Zhai and L.P. Cai (*Beijing Jiaotong University, China*)
- 11:10 B3-103 **Fabrication, mechanical properties and tribological behaviors of Ti₂Al_{1-x}Sn_xC solid solutions**
L.P. Cai, Z.Y. Huang, W.Q. Hu, C. Lei and H.X. Zhai (*Beijing Jiaotong University, China*)
- 11:30 SB3-102 **Synthesis and characterization of MoAlB ceramics**
L.D. Xu, C.Y. Liu, D.G. Zhu and C.F. Hu (*Southwest Jiaotong University, China*)

Programme Schedule

Morning, November 6 ♦ Meeting Room 6

(08:00 ~ 09:45)

Electrical Ceramics and Their Applications

Chair: G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)

- 08:00** **Welcome address**
G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- 08:05** **C1-002** **Lead-free single-phase multiferroic ceramics for current sensing applications**
Invited K.H. Lam (*Hong Kong Polytechnic University, Hong Kong*)
- 08:30** **C5-001** **Ag(Nb_{0.5}Ta_{0.5})O₃ thin film by pulsed laser deposition: current challenges and future perspectives**
Invited D. Suvorov¹, M. Spreitzer¹ and L. Li^{1,2} (¹*Jožef Stefan Institute, Slovenia*; ²*Zhejiang University, China*)
- 08:55** **C2-005** **Microscopic structure of oxygen vacancies in perovskite oxides and the role**
Invited C.H. Park and D. Kim (*Pusan National University, Korea*)
- 09:20** **C2-008** **Alternating current poling process for piezoelectric materials application**
Invited Y. Yamashita and T. Karaki (*Toyama Prefectural University, Japan*)

(10:00 ~ 11:50)

Electrical Ceramics and Their Applications

Chair: Y. Bai (*University of Science and Technology Beijing, China*)

- 10:00** **C2-010** **Electric and thermal properties of PLZT piezoelectric ceramics near phase transition temperature**
Invited Z.P. Ding, J.T. Zeng, X.Z. Ruan, X. Shi, L.Y. Zheng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- 10:25** **C2-002** **Giant actuation strain nearly 0.6% in a periodically orthogonal poled lead titanate zirconate ceramic via reversible domain switching**
Invited F.X. Li, Q.Z. Wang and H.C. Miao (*Peking University, China*)
- 10:50** **C2-120** **Structure, electrical and thermal expansion properties of PZnTe-PZT ternary system piezoelectric ceramics**
X. Huang, J.T. Zeng, X.Z. Ruan, L.Y. Zheng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- 11:10** **C2-115** **BiFeO₃-based relaxor ferroelectrics with enhanced rhombohedral domain switching and low field driven high electromechanical strain responses**
Y. Zhang, W.L. Zhao, J. Fu and R.Z. Zuo (*Hefei University of Technology, China*)
- 11:30** **C1-115** **Strain-engineered magnetoelectric effect in piezoelectric-ferrite heterostructure**
J.Y. Lian^{1,2}, F. Ponchel², D. Remiens², Y. Chen¹, W.B. Zhang¹, G.S. Wang¹ and X.L. Dong¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Université des Sciences et Technologies de Lille, France*)

Morning, November 6 ♦ Meeting Room 7

(08:00 ~ 09:55)

Materials for Energy Conversion and Energy StorageChair: E. Guilmeau (*UMR-CNRS 6508, ENSICAEN, France*)

- 08:00 F1-002 Invited** **Flexible thermoelectric devices as energy harvesters towards IoT society**
K. Koumoto¹, R. Tian¹, C. Wan², Y. Wang³, Q. Wei⁴, T. Ishida⁴, A. Yamamoto⁴, W. S. Shin⁴, N. Wang⁵, H. Lin² and S. Li⁶ (¹*Toyota Physical and Chemical Research Institute, Japan*; ²*Tsinghua Univ., China*; ³*Nanjing Tech Univ., China*; ⁴*AIST, Japan*; ⁵*Hainan Univ., China*; ⁶*Univ. of NSW, Australia*)
- 08:25 F1-005 Invited** **High-performance inorganic/organic superlattices for flexible thermoelectric energy harvesting**
C.L. Wan (*Tsinghua University, China*)
- 08:50 F1-001 Invited** **Microwave sintering and characteristics of the (ZnO)_k·In₂O₃ thermoelectric ceramics**
S. Bernik¹, M. Košir^{1,2}, E. Savary³, S. Marinell³ and E. Guilmeau³ (¹*Jožef Stefan Institute, Slovenia*; ²*Jožef Stefan International Postgraduate School, Slovenia*; ³*CRISMAT Laboratoire, France*)
- 09:15 F1-102** **Flexible paper supporting Ag₂Te nanowires film with superior thermoelectric performance**
J. Gao, C.Y. Liu, L. Miao, X.Y. Wang, Y. Peng, X.Y. Wei and J.H. Zhou (*Guilin University of Electronic Technology, China*)
- 09:35 F1-101** **Promising thermoelectric properties of two new cobalt oxides**
C. Chen¹, F. Schoenstein², D. Flahaut³, M. Zaghrioui¹, L. Perrière⁴, B. Pignon¹, F. Giovannelli¹ and F. Delorme¹ (¹*Univ. François Rabelais de Tours, France*; ²*Univ. Paris 13, France*; ³*Université Pau and Pays de l'Adour, France*; ⁴*ICMPE, UMR 7182 CNRS-UPEC, France*)

(10:05 ~ 12:00)

Materials for Energy Conversion and Energy StorageChair: S. Bernik (*Jožef Stefan Institute, Slovenia*)

- 10:05 F1-004 Invited** **Processing of copper-based complex sulphides for thermoelectric applications**
V.P. Kumar¹, L. Paradis-Fortin^{1,2}, T. Barbier¹, P. Lemoine², V. Caignaert¹, B. Raveau¹, B. Malaman³, G. Le Caër², S. Cordier² and E. Guilmeau (¹*UMR-CNRS 6508, ENSICAEN, France*; ²*Univ. Rennes I, France*; ³*Univ. Lorraine, France*)
- 10:30 F1-003 Invited** **Study on the fabrication and performance enhancement of thermoelectrics for energy conversion application**
X.Y. Zhou (*Chongqing University, China*)
- 10:55 F1-103** **Preparation of n-type Bi₂Te₃ bulk thermoelectric materials with low thermal conductivity**
X.F. Lu, S.J. Gu, Z.X. Zhou, L.J. Wang, W. Jiang and Y.C. Fan (*Donghua University, China*)
- 11:15 F3-001 Invited** **R&D of carbon-based materials for solar-driven steam generation**
L. Miao, P.F. Liu, Z.Y. Deng, J.H. Zhou and S. Hui (*Guilin University of Electronic Technology, China*)
- 11:40 F6-104** **High pulse power density of PLZST antiferroelectric ceramics**
C.H. Xu, X.F. Chen, G.S. Wang and X.L. Dong (*Shanghai Institute of Ceramics, CAS, China*)

Programme Schedule

Morning, November 6 ♦ Meeting Room 8

(08:00 ~ 09:50)

Nanostructured Materials and Nanotechnology

Chair: H. Wu (*Tsinghua University, China*)

- 08:00 I4-002 **Highly efficient, visible-light-activated photocatalysts with post-illumination “memory” effect**
Invited
Q. Li (*Institute of Metal Research, CAS, China*)
- 08:25 I4-003 **Photoactive semiconducting oxides for photocatalysis**
Invited
A.H. Kassiba (*Université du Maine, France*)
- 08:50 I4-103 **A feasible method to prepare novel flower-like NiS/CdS heterostructure nanocomposite photocatalysts for highly efficient hydrogen evolution**
Y. Zhang^{1,2}, Z.J. Peng¹, S.D. Guan^{1,2} and X.L. Fu² (¹*China University of Geosciences, China*; ²*Beijing University of Posts and Telecommunications, China*)
- 09:10 I4-105 **In-situ growth of TiO₂ on TiN nanoparticles for non-noble-metal plasmonic photocatalysis**
C. Li, W.Y. Yang, L.M. Liu, W.Z. Sun and Q. Li (*Institute of Metal Research, CAS, China*)
- 09:30 I1-103 **Fabrication of graphitic carbon spheres via a hydrothermal process combined catalytic graphitization method using cobalt as catalysts**
S.S. Li¹, J.K. Wang¹, Q. Zhu¹, X.W. Zhao¹, H.J. Zhang¹ and S.W. Zhang² (¹*Wuhan University of Science and Technology, China*; ²*University of Exeter, UK*)

(10:00 ~ 11:50)

Nanostructured Materials and Nanotechnology

Chair: Q. Li (*Institute of Metal Research, CAS, China*)

- 10:00 I1-003 **High-temperature resilience of ceramic nanofiber sponges**
Invited
H.L. Wang and H. Wu (*Tsinghua University, China*)
- 10:25 I1-002 **SiC nanowires and electronics**
Invited
W.Y. Yang and S.L. Chen (*Ningbo University of Technology, China*)
- 10:50 I1-105 **Preparation of SnO₂ nanowires with controlled morphologies using a coprecipitation method**
W. Xie and X.D. Li (*Northeastern University, China*)
- 11:10 I1-101 **Novel processing of carbon nanotubes grown on molecular sieve coated biomorphic materials**
J.G. Park and I.J. Kim (*Hanseo University, Korea*)
- 11:30 I1-108 **Scale-up fabrication and growth mechanism of silicon carbide nanofibers**
J.J. Chen and M. Jiang (*Zhejiang Sci-Tech University, China*)

Programme Schedule

Morning, November 6 ♦ 鑫顺翔酒店 19 层 1 号会议室

(08:00 ~ 09:45)

FCT 杯境内学生口头报告竞赛预赛

- 08:00 A2-102 **The effects of Si or Fe addition on crystallization behavior and phase transformation of polyvinsilazane**
曹利生 (天津大学)
- 08:10 B1-126 **Preparation, characterization and adsorption property of methyl modified SiO₂ aerogels**
张峰瑞 (天津大学)
- 08:20 B2-137 **Effects of MgTiO₃ addition on the properties of Si₃N₄ ceramics by pressureless sintering**
段于森 (中国科学院上海硅酸盐研究所)
- 08:30 C2-114 **Relaxor properties in Nb-doped 0.94NBT-0.06BT lead-free ferroelectric ceramics**
罗蕙佳代 (哈尔滨工业大学)
- 08:40 C5-113 **Investigation on the polarization mechanism of co-doped LaGaO₃ colossal permittivity ceramics**
罗婷婷 (中国科学院上海硅酸盐研究所)
- 08:50 E2-103 **Study on the improvement of mechanical properties of titanium dioxide aerogels by adding PVA and asbestos fiber**
乐 弦 (中国科学院大学)
- 09:00 休 息
- 09:10 E3-102 **Improvement of thermal stability of ZrO₂-SiO₂ aerogel modified by Ca(II) cations**
赵航远 (天津大学)
- 09:20 F4-106 **SiOC-coated Si composite as anode materials for lithium ion batteries**
桑志远 (天津大学)
- 09:30 F4-107 **Solvothermal synthesis and properties of spindle-shaped Na₂FePO₄F/C for the cathode material of sodium ion battery**
凌 瑞 (天津大学)
- 09:40 F6-102 **Fabrication of PANI/TiO₂ nanotube arrays for electrochemical energy storage**
肖甜甜 (河北工业大学)
- 09:50 G7-102 **A smart method to prepare high-performance tin oxide based thin film varistors**
王 琪 (中国地质大学(北京))
- 10:00 H5-104 **Fabrication of transparent yttria ceramics by alcoholic slip-casting**
许杨阳 (上海大学)
- 10:10 休 息
- 10:20 H5-107 **Cation-substitution induced stable GGAG:Ce³⁺ ceramics with improved optical and scintillation properties**
张继云 (中国科学院宁波材料技术与工程研究所)

- 10:30 H5-108 The dopants of Mg²⁺ in GGAG:Ce ceramic to enhance the performance of scintillation materials**
冯少尉 (中国科学院宁波材料技术与工程研究所)
- 10:40 H6-101 Preparation and characterization of poly(acrylic acid) stabilized Eu³⁺-doped hydroxyapatite fluorescent quantum dots**
邢庆国 (武汉理工大学)
- 10:50 J3-104 Chemical origin of termination-functionalized MXenes: Ti₃C₂T₂ as a case study**
胡 涛 (中国科学院金属研究所)
- 11:00 J4-102 Facile fabrication of rGO/MnO₂/PPy composite film for high performance supercapacitor**
陈俊臣 (哈尔滨工业大学)
- 11:10 J6-101 Preparation and properties of few-layered porous boron nitride nanosheets**
储小鹏 (北京理工大学)
- 11:20 SC7-101 Accident tolerant zircaloy with ceramic coatings**
鲍伟超 (中国科学院上海硅酸盐研究所)
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Afternoon, November 6 ♦ Meeting Room 0

(14:00 ~ 16:10)

Geopolymer and Geopolymer Developed Ceramics & Composites

Chair: X.M. Cui (*Guangxi University, China*)

- 14:00 SF3-001 **Durability of metakaolin based geopolymer composites under chemical attack**
Invited Y.S. Zhang, M. Wu and W. Sun (*Southeast University, China*)
- 14:25 SF4-001 **The mechanical properties and thermal resistance of geopolymer foams**
Invited C.Y. Heah, Y.M. Liew, N.H. Teng, M.M.A.B. Abdullah and K. Hussin (*Universiti Malaysia Perlis, Malaysia*)
- 14:50 SF1-103 **Geopolymerization process and mechanism of the lithium-substituted cesium-based geopolymers**
J.K. Yuan, P.G. He and D.C. Jia (*Harbin Institute of Technology, China*)
- 15:10 SF1-105 **Preparation of high-magnesium nickel slag based porous geopolymers**
L.P. Liu^{1,2,3}, G.J. Zheng¹ and C.J. Shi² (¹*Guangxi Teachers Education University, China*; ²*Hunan University, China*; ³*Guangxi Transportation Research Institute, China*)
- 15:30 SF2-102 **Immobilization of simulated radionuclide $^{133}\text{Cs}^+$ and $^{87}\text{Sr}^{2+}$ by geopolymer**
M.L. Wang, P.G. He, D.C. Jia, J.K. Yuan, Z.H. Yang, X.M. Duan and Y. Zhou (*Harbin Institute of Technology, China*)
- 15:50 SF7-101 **Preparation of strong geopolymer composite structures by extrusion based 3D printing**
R.F. Wang, P.H. He, D.C. Jia, J.K. Yuan, Z.H. Yang, X.M. Duan and Y. Zhou (*Harbin Institute of Technology, China*)

(16:20 ~ 18:00)

Mechanical Properties

Chair: D.Y. Jiang (*Shanghai Institute of Ceramics, CAS, China*)

- 16:20 B2-005 **In situ fracture tests of ceramic grain boundaries**
Invited F. Giuliani (*Imperial College London, UK*)
- 16:45 B2-136 **Strengthening effect of twin boundary in large-grained AlON transparent ceramics**
H.L. Guo¹, F. Chen¹, J. Wang¹, F. Sun², F. Zhang³, J. Zhang¹ and S.W. Wang¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Shanghai Jiaotong University, China*; ³*National Engineering Research Center for Nanotechnology, China*)
- 17:05 Z0-102 **Enhanced tensile properties of Al matrix composites reinforced with $\beta\text{-Si}_3\text{N}_4$ whiskers**
C.X. Zhang, J.W. Yin, D.X. Yao, K.H. Zuo, Y.F. Xia, H.Q. Liang and Y.P. Zeng (*Shanghai Institute of Ceramics, CAS, China*)
- 17:25 B4-101 **On the creep fatigue of GH4133B superalloy used in turbine disk of aero-engine**
R.G. Zhao (*Xiangtan University, China*)

Afternoon, November 6 ♦ Meeting Room 1

(14:00 ~ 15:50)

Ceramics and Composites for Structural Applications

Chair: D.H. Yoon (*Yeungnam University, Korea*)

- 14:00 B2-006 **Additive-free hot-pressed silicon carbide ceramics – a material with exceptional properties**
Invited
P. Šajgalík (*Slovak Academy of Sciences, Slovakia*)
- 14:25 B2-003 **High thermal conductivity silicon nitride ceramics for power device applications**
Invited
Y. Zhou¹, H. Hyuga¹, D. Kusano² and K. Hirao¹ (¹*AIST, Japan*; ²*Japan Fine Ceramics Co., Ltd., Japan*)
- 14:50 B2-101 **Sialon-based composites prepared from the aluminiumoxynitride SHS-derived powders**
A. Wilmański and M.M. Bućko (*AGH University of Science and Technology, Poland*)
- 15:10 B2-115 **Preparation of electrically conductive Si₃N₄-ZrB₂ ceramic composites with a continuous 3D network**
L.Y. Zeng, W.M. Guo and H.T. Lin (*Guangdong University of Technology, China*)
- 15:30 B2-117 **Study of rapid nitridation and sintered reaction-bonding Si₃N₄ ceramics**
L.X. Wu, W.M. Guo and H.T. Lin (*Guangdong University of Technology, China*)

(16:00 ~ 17:50)

Ceramics and Composites for Structural Applications

Chair: Y. Zhou (*AIST, Japan*)

- 16:00 B2-001 **Electrophoretic deposition for the fabrication of SiC_f/SiC composites**
Invited
D.H. Yoon¹, P. Fitriani¹, K. Raju¹, A.S. Sharma¹ and J.Y. Park² (¹*Yeungnam University, Korea*; ²*Korea Atomic Energy Research Institute, Korea*)
- 16:25 B2-002 **Silicon- and boron-based non-oxide ceramics and nanocomposites through chemistry of modified organosilicon and organoboron polymers**
Invited
R. Lucas (*European Ceramic Center, France*)
- 16:50 B2-133 **Preparation, microstructure and conductive performance of SiC-TiN composite ceramics**
H.L. Li, Z.H. Yang, H.F. Wu, D.L. Cai, Y.S. Sun, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)
- 17:10 B2-134 **Strengthening and toughening effects of MWCNTs on SiBCN ceramics sintered with SPS technique**
N. Liao, D.C. Jia, Z.H. Yang and Y. Zhou (*Harbin Institute of Technology, China*)
- 17:30 B2-119 **Graded Si₃N₄ ceramics with hard surface and tough core by two-step hot pressing**
J.J. Yu¹, W.M. Guo¹, S.K. Sun², H.T. Lin¹ and C.Y. Wang¹ (¹*Guangdong University of Technology, China*; ²*University of Sheffield, UK*)

Programme Schedule

Afternoon, November 6 ♦ Meeting Room 2

(14:00 ~ 15:15)

Advanced Materials for Next Generation Nuclear Energy

Chair: Y.H. Li (*Lanzhou University, China*)

- 14:00 SC3-001 **Zirconolite glass-ceramic wasteform for actinide disposition**
Invited S.K. Sun, M. Stennett, C. Corkhill and N. Hyatt (*The University of Sheffield, UK*)
- 14:25 SC4-001 **Improving the damage-tolerance of zircaloy cladding by integrated ceramic coatings**
Invited J. Zhang (*Institute of Metals Research, CAS, China*)
- 14:50 SC1-001 **Synthesis and radiation induced self-healing behaviors of Gd₂Zr₂O₇ nanograin ceramics**
Invited J.Q. Qi, Z.Y. Huang, M. Zhou and T.C. Lu (*Sichuan University, China*)

(15:30 ~ 17:30)

Advanced Materials for Next Generation Nuclear Energy

Chair: S.K. Sun (*The University of Sheffield, UK*)

- 15:30 L-001 **Effect of specimen size on type-I fracture toughness of experimental nuclear graphite grade SNG742 for high temperature nuclear reactor**
H.Yang¹, A.A. Campbell², J.W. Geringer², Y. Katoh², T.D. Burchell², H.Li¹, D.Huang¹ and H.Z. Wu^{1,3} (¹*Sinosteel Advanced Materials (Zhejiang) Co., Ltd, China*; ²*Oak Ridge National Laboratory, USA*; ³*Loughborough University, UK*)
- 15:50 SC1-103 **Microstructure, mechanical, and thermal properties of self-joining SiC whisker reinforced Ti₃SiC₂ composites fabricated by spark plasma sintering**
X.B. Zhou^{1,2}, T. Nishimura³, B.K. Jang³, Y. Han², S.Y. Du¹, J. Lee² and Q. Huang¹ (¹*Ningbo Institute of Materials Technology and Engineering, CAS, China*; ²*Yeungnam University, Korea*; ³*National Institute for Materials Science, Japan*)
- 16:10 SC1-105 **Controllable synthesis and applications of uranium oxides nano- and sub-micrometer structures**
Y.W. Mao, H.B. Zhang, Q. Yan, X.S. Zhou and S.P. Peng (*China Academy of Engineering Physics, China*)
- 16:30 B2-124 **Optimization of hot-pressing sintering process of boron carbide ceramic based on orthogonal experiments**
Z.C. Liu, Z.X. Qu and Y. Sun (*Beijing University of Technology, China*)
- 16:50 I5-105 **A novel technique of fabricating rare nano-Li₂TiO₃ ceramic pebbles as tritium breeders via surfactants-assisted method**
H.L. Wang, J.Q. Qi, Z.J. Liao and T.C. Lu (*Sichuan University, China*)
- 17:10 G5-103 **Effect of slurry viscosity on wall thickness of B₄C ceramic hollow microspheres prepared by gel-casting**
R.C. Chen, J.Q. Qi, Z.J. Liao and T.C. Lu (*Sichuan University, China*)

Afternoon, November 6 ♦ Meeting Room 3

(14:00 ~ 15:50)

Progress and Challenges in Lead-Free Piezoelectrics

Chair: Z.Y. Shen (*Jingdezhen Ceramic Institute, China*)

- 14:00 SD2-002 Invited** **Mechanisms of thermal depolarization and electromechanical hardening in lead-free piezoelectric composites**
J. Koruza, L.K. Venkataraman, L. Riemer and J. Rödel (Technische Universität Darmstadt, Germany)
- 14:25 SD3-001 Invited** **Nanoscale piezoelectric response and domain relaxation of (K,Na)NbO₃-based lead-free perovskite with abnormal grain growth**
K. Wang, T.L. Men, W. Sun and J.F. Li (Tsinghua University, China)
- 14:50 SD1-102** **BaZrO₃ and (Bi,Na)ZrO₃ modified KNN-based lead-free piezoceramics: intrinsic and extrinsic contributions to piezoelectricity**
Q. Liu, J.F. Li, Y.C. Zhang, L. Zhao, J. Gao, K. Wang and L.T. Li (Tsinghua University, China)
- 15:10 C3-105** **Giant strain and electric-field-induced phase transition in lead-free (Na_{0.5}Bi_{0.5})TiO₃-BaTiO₃-(K_{0.5}Na_{0.5})NbO₃ single crystal**
C. Chen¹, X.P. Jiang¹ and H.S. Luo² (¹Jingdezhen Ceramic Institute, China; ²Shanghai Institute of Ceramics, CAS, China)
- 15:30 SD1-101** **Fatigue behaviour and thermal stability of Ca, Zr doped lead-free piezoelectric ceramics**
Y.C. Zhang¹, F.Z. Yao¹, J. Glaum³, K. Wang¹, M. Hoffman² and J.F. Li¹ (¹Tsinghua University, China; ²University of NSW, Australia; ³Norwegian University of Science and Technology, Norway)

(16:00 ~ 17:50)

Progress and Challenges in Lead-Free Piezoelectrics

Chair: K. Wang (*Tsinghua University, China*)

- 16:00 SD2-004 Invited** **Enhanced properties of CaBi₄Ti₄O₁₅ high temperature piezoceramics by Nb and Mn co-doping**
Z.Y. Shen¹, Y.X. Tang², Y.M. Li¹ and S.J. Zhang³ (¹Jingdezhen Ceramic Institute, China; ²Shanghai Normal Univ., China; ³University of Wollongong, Australia)
- 16:25 C2-001 Invited** **Passium-sodium niobate based lead-free ceramics: novel electrical energy storage materials**
H.L. Du, T.Q. Shao, H. Ma, S.B. Qu, J. Wang, J.F. Wang (Air Force Engineering University, China)
- 16:50 C2-105** **Synthesis and study of lead-free ferroelectric materials for energy storage**
H. Ait Laasri^{1,2}, A. Tachafine¹, D. Fasquelle¹, M. Elaatmani², M. Rguiti³, A. Outzourhit² and J.-C. Carru¹ (¹ULCO Univ., France; ²Cadi Ayyad Univ., Morocco; ³Univ. Valenciennes and Hainaut-Cambresis, France)
- 17:10 C2-113** **Synthesis of Na_{0.5}Bi_{0.5}TiO₃-CoFe₂O₄ composite ceramic by sol-gel method**
F.Z. Li, H. Ke, H.J. Zhang, L.W. Zhang, L. Cao, H.J.D. Luo, D.C. Jia and Y. Zhou (Harbin Institute of Technology, China)
- 17:30 SD3-101** **Relationship between electric field induced strains and phase instability in (Na,K)(Nb,Sb)O₃-LiTaO₃ lead-free ceramics close to O-T phase boundary**
H. Qi, Y. Zhang, J. Fu and R.Z. Zuo (Hefei University of Technology, China)

Programme Schedule

Afternoon, November 6 ♦ Meeting Room 5

(14:00 ~ 15:40)

UHTC & MAX Phase Workshop 2017

Chair: L. Vandeperre (*Imperial College London, UK*)

- 14:00 SB2-004 **Mechanical properties of zirconium diboride ceramics**
Invited G. Hilmas and W. Fahrenholtz (*Missouri University of Science and Technology, USA*)
- 14:25 SB2-006 **High-temperature strength of ZrB₂-SiC ultra-high temperature ceramics with the addition of WC**
Invited G.J. Zhang (*Donghua University, China*)
- 14:50 SB2-002 **Thermal properties of high purity zirconium diboride ceramics**
Invited W. Fahrenholtz and G. Hilmas (*Missouri University of Science and Technology, USA*)
- 15:15 B2-004 **Pressureless densification mechanism and properties of (Ta,Hf)C-based ultra-high-temperature ceramic composites**
Invited J. Yin, B.H. Zhang, X.J. Liu and Z.R. Huang (*Shanghai Institute of Ceramics, CAS, China*)

(16:00 ~ 17:55)

UHTC & MAX Phase Workshop 2017

Chair: W. Fahrenholtz (*Missouri University of Science and Technology, USA*)

- 16:00 SB3-007 **Porous ZrB₂ manufacturing for transpiration cooling systems for hypersonic flights**
Invited L. Larrimbe, W. E. Lee and L. Vandeperre (*Imperial College London, UK*)
- 16:25 SB3-001 **Synthesis and characterization of borothermal group IV and V metal diboride nanocrystals**
Invited L. Zoli, L. Silvestroni and D. Sciti (*CNR-ISTEC, Italy*)
- 16:50 SB2-005 **Advances in the processing and characterization of Hi-tech composites for severe environments**
Invited D. Sciti, L. Zoli and L. Silvestroni (*CNR-ISTEC, Italy*)
- 17:15 SB2-101 **Modification of the fiber-matrix interface in the carbon fiber reinforced ZrB₂-based ultra-high temperature ceramic composite**
Y.F. Zu, J. Li, J.X. Dai and J.J. Sha (*Dalian University of Technology, China*)
- 17:35 SB4-104 **Effect of WC on oxidation resistance of ZrB₂-SiC coating fabricated by vacuum plasma spray**
C. Li, Y.R. Niu, X.B. Zheng and C.X. Ding (*Shanghai Institute of Ceramics, CAS, China*)

Afternoon, November 6 ♦ Meeting Room 6

(14:00 ~ 15:50)

Electrical Ceramics and Their Applications

Chair: L.M. Zheng (*Harbin Institute of Technology, China*)

- 14:00 C2-009 Invited** **Relaxor ferroelectric ceramics: suitable materials for electrocaloric cooling applications**
B. Malič^{1,2}, M. Vrabelj^{1,2}, L. Fulanović^{1,2}, H. Uršič¹, S. Drnovšek¹, A. Benčan^{1,2}, B. Rožič¹, V. Bobnar^{1,2}, and Z. Kutnjak^{1,2} (¹*Jožef Stefan Institute, Slovenia*; ²*Jožef Stefan International Postgraduate School, Slovenia*)
- 14:25 C2-003 Invited** **Multiple tailoring of electrocaloric materials by phase transition**
Y. Bai, J.T. Li, J.J. Li, S.Q. Qin and L.J. Qiao (*University of Science and Technology Beijing, China*)
- 14:50 C2-103** **Giant electrocaloric effect in hot-pressed PLZT ceramics**
G.Z. Zhang, M. Shen and S.L. Jiang (*Huazhong University of Science and Technology, China*)
- 15:10 C2-121** **The relationship between electrocaloric response and polarization behavior: normal and relaxor ferroelectricity**
X. Nie, S.G. Yan, X.F. Chen and G.S. Wang (*Shanghai Institute of Ceramics, CAS, China*)
- 15:30 C5-117** **Effect of lattice occupation behavior of Li⁺ on microstructure and electrical properties of BaTiO₃ ceramics**
Q.W. Lou¹, J.T. Zeng¹, Z.Y. Man¹, L.Y. Zheng¹, C.H. Park² and G.R. Li¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Pusan National Univ., Korea*)

(16:00 ~ 17:30)

Electrical Ceramics and Their Applications

Chair: T. Karaki (*Toyama Prefectural University, Japan*)

- 16:00 C1-001 Invited** **Atomic structure and chemistry of complex functional oxide ceramics and thin films**
I. MacLaren (*University of Glasgow, UK*)
- 16:25 C2-007 Invited** **Origin of mechanical quality factor improvement in acceptor doped relaxor-based ferroelectric single crystals**
L.M. Zheng¹, L.Y. Yang¹ and W.W. Cao^{1,2} (¹*Harbin Institute of Technology, China*; ²*The Pennsylvania State University, USA*)
- 16:50 C1-111** **Ferromagnetic domain structures observed in multiferroic BiFeO₃ ceramics**
L.W. Zhang, H. Ke, H.J. Zhang, H.J.D. Luo, F.Z. Li, Y.C. Liu, W. Wang, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)
- 17:10 C2-116** **A strategy of preparing ultrafine BaTiO₃ powder applied on MLCC via solid-state and two-step pre-sintering process**
Y.X. Wang, J.X. Wen, L. Zhang and H.Y. Yu (*Southern University of Science and Technology, China*)

Afternoon, November 6 ♦ Meeting Room 7

(14:00 ~ 15:50)

Materials for Energy Conversion and Energy Storage

Chair: X.Y. Zhou (*Chongqing University, China*)

- 14:00 F4-001 **In-situ preparation of integrative anodes for lithium ion batteries by laser ablation oxidation**
Invited
C.A. Wang (*Tsinghua University, China*)
- 14:25 F4-002 **Lithium titanate hydrates with superior power rate and ultralong cycle life for lithium ion batteries**
Invited
S.T. Wang^{1,2}, J. Lu³, J. Li² and Z.L. Tang¹ (¹*Tsinghua University, China*; ²*MIT, USA*; ³*Argonne National Laboratory, USA*)
- 14:50 F4-102 **Microwave-assisted synthesis of CNTs@Ti₃C₂ hierarchical nanostructure for energy storage application in LIBs**
W. Zheng, Z.M. Sun, P.G. Zhang, W.B. Tian, Y. Wang and Y.M. Ying (*Southeast University, China*)
- 15:10 F4-104 **Preparation and properties of Li₂CO₃-doped Li₄Ti₅O₁₂ ceramic targets**
L. Dong, C. Wang, H. Liu, J.C. Shen, J.T. Zhao and H.T. Yang (*Shenzhen University, China*)
- 15:30 F4-109 **Preparation and properties of LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ ceramic targets**
H. Liu, L. Dong, C. Wang, J.C. Shen, J.T. Zhao and H.T. Yang (*Shenzhen University, China*)

(16:00 ~ 17:55)

Materials for Energy Conversion and Energy Storage

Chair: L. Miao (*Guilin University of Electronic Technology, China*)

- 16:00 F5-001 **Surfaces and interfaces in oxides under oxidizing and reducing conditions: the effect of nickel**
Invited
I.E. Reimanis (*Colorado School of Mines, USA*)
- 16:25 F5-003 **Chemically stable proton conducting ceramic materials for solid oxide fuel cells**
Invited
E. Traversa (*University of Electronic Science and Technology of China, China*)
- 16:50 F5-002 **Field assisted sintering of garnet-type Li₇La₃Zr₂O₁₂ solid electrolyte for all solid-state batteries**
Invited
F. Chen, J.Y. Li, D.J. Yang, Y.H. Zhang, Q. Shen and L.M. Zhang (*Wuhan University of Technology, China*)
- 17:15 F5-102 **Anode microstructure tailoring toward high-performance microtubular solid oxide fuel cells**
T. Liu^{1,2,3}, C. Ren^{3,4}, S.M. Fang³, Y. Wang^{1,2} and F.L. Chen³ (¹*Wuhan University, China*; ²*Suzhou Institute of Wuhan University, China*; ³*University of South Carolina, USA*; ⁴*Xidian University, China*)
- 17:35 F5-104 **Effect of work pressure on microstructure and electrical properties of yttria-stabilized zirconia thin films deposited by radio frequency magnetron sputtering**
Y.X. Ou, T.J. Li, Z.Y. Li, M.F. Zhang, L. Yao and W. Pan (*Tsinghua University, China*)

Afternoon, November 6 ♦ Meeting Room 8

(14:00 ~ 15:50)

Nanostructured Materials and Nanotechnology

Chair: W.Y. Yang (*Ningbo University of Technology, China*)

- 14:00 I1-001 **Structural and morphological modification of nanowires and nanosheets**
Invited H. Tatsuoka, S. Kusazaki, Y. Saito, Y. Kumazawa, N. Atsumi, L. Cheng and P.L. Yuan (*Shizuoka University, Japan*)
- 14:25 J1-001 **Emerging 2D metal oxide nanosheets with atomic level thickness for sustainable applications**
Invited Z.Q. Sun (*Queensland University of Technology, Australia*)
- 14:50 J1-101 **Preparation of Ti_3C_2 and Ti_2C MXenes by fluoride salts etching and methane adsorptive properties**
F.F. Liu, A.G. Zhou, J.F. Chen, L.B. Wang and Q.K. Hu (*Henan Polytechnic University, China*)
- 15:10 J3-101 **High-capacitance mechanism for $Ti_3C_2T_x$ MXene by in situ electrochemical raman spectroscopy investigation**
M.M. Hu, Z.J. Li, T. Hu, S.H. Zhu, C. Zhang and X.H. Wang (*Institute of Metal Research, CAS, China*)
- 15:30 J2-102 **Probing the thermal stability of multilayer Ti_3C_2 in different atmospheres**
F.Y. Kong, Y.L. Bai, N. Li, X.X. Qi, Y.T. Zheng, X.D. He and R.G. Wang (*Harbin Institute of Technology, China*)

(16:00 ~ 18:00)

Nanostructured Materials and Nanotechnology

Chair: Z.Q. Sun (*Queensland University of Technology, Australia*)

- 16:00 B3-102 **The preparation and properties of Ag/ Ti_3C_2 electrical contact materials**
J.X. Ding, Z.M. Sun, P.G. Zhang, W.B. Tian, M. Zhang and Y.M. Zhang (*Southeast University, China*)
- 16:20 J1-106 **Assembly from 2D g- C_3N_4 and graphene oxide to 3D hybrid aerogel for highly efficient solar steam generation**
H. Su, J.H. Zhou, L. Miao, P.F. Liu, Z.Y. Deng and L.H. Huang (*Guilin University of Electronic Technology, China*)
- 16:40 J1-104 **Effect of intercalation agent type and content on graphene preparation**
F. Jiang, Y. Yu, A.H. Feng, Y. Yu, L. Mi and L.X. Song (*Shanghai Institute of Ceramics, CAS, China*)
- 17:00 J7-102 **Preparation and adsorption property of graphene oxide by using waste graphite from diamond synthesis industry**
S.S. Ding¹, H.L. Xu¹, B.Y. Yang¹ and R. Zhang^{1,2} (¹Zhengzhou University, China; ²Zhengzhou Institute of Aeronautical Industry Management, China)
- 17:20 I2-104 **Design and preparation of sandwich-like $MnO_2@Pd@CeO_2$ hollow spheres with enhanced activity for CO oxidation**
J. Zhang and C.A. Wang (*Tsinghua University, China*)
- 17:40 I1-102 **Effect of catalyst kinds on preparation of carbon nanotubes via pyrolysis of phenolic resin**
J.K. Wang, S.S. Li, L. Han, S.T. Ge, J.B. Song and H.J. Zhang (*Wuhan University of Science and Technology, China*)

(19:30 ~ 22:00)

Special Lecture

Mentorship for Young Scientists: Developing Scientific Survival Skills

F. Rosei (*INRS, Canada*)

In this lecture, I will try to convey a feeling for our course on “Survival Skills for Scientists” [1]. This is a graduate course designed and developed in my department, in which we give basic advice and offer mentorship to our graduate students and post-docs. The central theme of this presentation is that succeeding in Science requires skills (often referred to as ‘soft professional skills’) beyond those needed for Science.

The lecture aims at giving basic guidance and mentoring to young scientists (typically science and engineering undergraduate and first year graduate students).

The main topics are: (1) The job market for graduates in science and engineering (industry, national labs and academia; advantages and disadvantages); (2) Funding in modern science; (3) Publish or perish; publishing quality papers, having an impact; (4) Presenting your work to your peers; (5) The fundamental laws of ‘scientific survival’ (know yourself, plan ahead, and play chess); (6) Ethics in modern science; (7) Alternative careers.

Programme Schedule

Morning, November 7 ♦ Meeting Room 0

(08:00 ~ 09:45)

Virtual Materials Design and Ceramic Genome

Chair: J.Y. Wang (*Institute of Metal Research, CAS, China*)

- 08:00** **Welcome address**
J.Y. Wang (*Institute of Metal Research, CAS, China*)
- 08:05** **SA3-001** **Using total bond order density as a quantum mechanical metric for**
Invited **characterizing advanced ceramics**
W.Y. Ching (*University of Missouri-Kansas City, USA*)
- 08:30** **SA1-002** **Exploring the landscape of functional oxides through first principles calculations**
Invited V.R. Cooper (*Oak Ridge National Laboratory, USA*)
- 08:55** **SA5-003** **In-cascade defect production and annihilation in silicon carbide**
Invited Y.W. Zhang^{1,2}, H.Z. Xue², E. Zarkadoula¹, R. Sachan¹, P. Liu^{2,3}, X.L. Wang³, S.
Zhang⁴, T.S. Wang⁴ and W.J. Weber^{2,1} (¹*Oak Ridge National Lab., USA*; ²*Univ.*
Tennessee, USA; ³*Shandong Univ., China*; ⁴*Lanzhou Univ., China*)
- 09:20** **SA1-001** **Solid-solution of dopants to “record” sintering and microstructural behaviors in**
Invited **structural ceramics**
H. Gu (*Shanghai University, China*)

(10:00 ~ 11:40)

Virtual Materials Design and Ceramic Genome

Chair: W.Y. Ching (*University of Missouri-Kansas City, USA*)

- 10:00** **SA5-001** **Phonon engineering for RE-silicate EBC candidates: challenges and**
Invited **opportunities**
J.Y. Wang (*Institute of Metal Research, CAS, China*)
- 10:25** **SA7-001** **Theoretical study of two-dimensional materials and their hybrids in energy**
Invited **applications**
T. Liao (*Queensland University of Technology, Australia*)
- 10:50** **SA9-001** **Theoretical investigations on the generalized stacking fault energy and twinn**
Invited **ability of ZrB₂**
H.M. Xiang and Y.C. Zhou (*Aerospace Research Institute of Materials and*
Processing Technology, China)
- 11:15** **SA5-002** **Understanding the atomic and electronic mechanism in low energy recoils of**
Invited **nuclear materials**
B. Liu (*Shanghai University, China*)

Morning, November 7 ♦ Meeting Room 1

(08:00 ~ 09:50)

Ceramics and Composites for Structural Applications

Chair: X.M. Duan (*Harbin Institute of Technology, China*)

- 08:00 G2-001** SiC nanowires/ribbons reinforced high-temperature ceramic coatings
Y.H. Chu¹ and H.J. Li² (¹*South China University of Technology, China*; ²*Northwestern Polytechnical University, China*)
- 08:25 G5-001** Ultra-fast fabrication of oriented 3C-SiC wafers by halide CVD
Invited S. Zhang¹, R. Tu¹, D.H. Zheng¹, H. Cheng¹, T. Goto² and L.M. Zhang¹ (¹*Wuhan University of Technology, China*; ²*Tohoku University, Japan*)
- 08:50 B7-101** The influence of addition of some alkali metals oxides on structure and selected parameters of the glass-ceramic composites
J. Partyka, K. Pasiut, M. Lesniak, M. Bucko and M. Sitarz (*AGH University of Science and Technology, Poland*)
- 09:10 B7-103** Preparation, microstructure and mechanical properties of MAS based glass-ceramic coating on porous BN/Si₃N₄O ceramics
Y.S. Sun, D.C. Jia, Z.H. Yang, D.L. Cai, Q. Li, H.L. Li and Y. Zhou (*Harbin Institute of Technology, China*)
- 09:30 B8-104** Influence of technological conditions on the properties of PcBN composites fabricated by spark plasma sintering
Y.P. Ding, Y.F. Dong, L. Fan, K. Gao, X.Q. Guo and R. Zhang (*Zhengzhou University of Aeronautics, China*)

(10:00 ~ 12:00)

Ceramics and Composites for Structural Applications

Chair: Y.H. Chu (*South China University of Technology, China*)

- 10:00 B2-125** Hexagonal boron nitride based composites containing dual glass phases
J.J. Chen, J.X. Chen and M.S. Li (*Institute of Metal Research, CAS, China*)
- 10:20 B2-132** Influence of grain size on the mechanical properties and sputtering resistance of h-BN ceramics
X.M. Duan, D.C. Jia, Z. Wang, Z.H. Yang and Y. Zhou (*Harbin Institute of Technology, China*)
- 10:40 B2-135** Textural microstructures evolution and mechanical properties of Y₂O₃-AlN/h-BN composite ceramics
B.F. Qiu, X.M. Duan, D.C. Jia, Y.M. Liu, Z.H. Yang and Y. Zhou (*Harbin Institute of Technology, China*)
- 11:00 B1-107** Oxidation behavior of β-sialon ultrafine powders prepared by the combined sol-gel and microwave carbothermal reduction nitridation method
F.L. Li¹, F. Fu², L.L. Lu¹, H.J. Zhang¹ and S.W. Zhang¹ (¹*Wuhan Univ. Sci. Technol., China*; ²*Luoyang Institute of Science and Technology, China*)
- 11:20 B2-123** Co-catalyzed nanofibers reinforced Si₃N₄/sialon bonded SiC refractories
J.T. Huang^{1,2}, Z.H. Hu¹, X.B. Li¹, M. Zhang¹, Z.J. Feng¹, X.L. Hou¹, J.M. Luo¹ (¹*Nanchang Hangkong Univ., China*; ²*Wuhan Univ. Sci. Technol., China*)
- 11:40 B5-104** Transformation from nonlinear to linear in electrical properties of SiC/ZrB₂ composite ceramics
J.J. Chen, J. Chen, Z.M. Chen, X.J. Liu, Z.R. Huang and Y.H. Huang (*Shanghai Institute of Ceramics, CAS, China*)

Programme Schedule

Morning, November 7 ♦ Meeting Room 2

(08:00 ~ 10:30)

FCT 杯境内学生口头报告竞赛预赛

决赛名单 11 月 7 号上午 10:00 前通知到本人。会场主席及评委临时指定。

(10:30 ~ 12:00)

Special Lecture

Writing and Publication of Scientific Paper

R. Riedel (*Technical University of Darmstadt, Germany*)

Programme Schedule

Morning, November 7 ♦ Meeting Room 3

(08:00 ~ 09:50)

Porous Ceramics

Chair: X.Z. Zhang (*Jingdezhen Institute of Ceramics, China*)

- 08:00 E4-001** **Fabrication and properties of ceramic membranes, used for separations under demanding conditions**
Invited
L. Winnubst (*University of Twente, the Netherlands*)
- 08:25 E1-001** **Porous ceramics from particle stabilized colloidal suspension**
Invited
B. Basnet, W.Y. Jang, J.G. Park and I.J. Kim (*Hanseo University, Korea*)
- 08:50 E3-101** **Preparation of yttrium silicate ceramic membrane and applications in membrane distillation process**
M.Y. Yang, H. Zhong, L.Y. Hao and X. Xu (*Univ. Sci. Technol. China, China*)
- 09:10 E6-101** **Highly stable hydrophobic SiNCO nanoparticle-modified silicon nitride membrane for zero-discharge water desalination**
J.W. Wang¹, L. Li¹, J.Q. Gu¹, M.Y. Yang¹, X. Xu¹, C.S. Chen¹, H.T. Wang² and S. Agathopoulos³ (¹*University of Science and Technology of China, China*; ²*Monash University, Australia*; ³*University of Ioannina, Greece*)
- 09:30 E2-104** **Effect of sintering temperature on the properties of porous purging plug materials**
Q.H. Wang, Y.B. Li, S.J. Li, R.F. Xiang, N.N. Xu and S. Ouyang (*Wuhan University of Science and Technology, China*)

(10:00 ~ 12:05)

Porous Ceramics

Chair: C.A. Wang (*Tsinghua University, China*)

- 10:00 F7-001** **Enhanced CO₂ electrolysis performance using high temperature ceramic membrane electrolyser based on Mn or Cr doped NbTi_{0.5}Ni_{0.5}O₄ cathodes**
Invited
X.Z. Zhang¹, J.P. Hu¹, L.T. Ye¹, Y.H. Jiang¹ and K. Xie² (¹*Jingdezhen Ceramic Institute, China*; ²*Fujian Inst. Res. on the Structure of Matter, CAS, China*)
- 10:25 E1-104** **Study on the dispersion behaviors of hydrophobic porous materials**
H. Yang¹, J.H. Xiang¹, H.Z. Sai², Y.L. Guan¹, R. Fu¹, T. Zhang¹, H.H. Jia¹ and X. Yue¹ (¹*Univ. Chinese Academy of Sciences, China*; ²*Tsinghua Univ., China*)
- 10:45 E1-107** **Preparation and properties of anorthite–mullite–corundum porous ceramics**
A.Z. Shui, K.H. Hua, J. Ma and L.F. Xu (*South China Univ. Technol., China*)
- 11:05 E2-101** **Preparation and properties of in situ synthesized porous anorthite/mullite ceramics**
L.H. Wu¹, C.W. Li¹, X. Tian¹ and C.A. Wang² (¹*Beijing Jiaotong University, China*; ²*Tsinghua University, China*)
- 11:25 E4-101** **Novel α -Si₃N₄ planar nanowire superhydrophobic membrane prepared through tape casting and in-situ nitridation of silicon**
L. Li¹, J.W. Wang¹, H. Zhong¹, L.Y. Hao¹, H. Abadikhah¹, X. Xu¹, C.S. Chen¹ and S. Agathopoulos² (¹*University of Science and Technology of China, China*; ²*University of Ioannina, Greece*)
- 11:45 E6-103** **The effect of multi-layered struts on the mechanical properties and combustion performance of SiC reticulated porous ceramics**
X. Liang, Y.W. Li, S.B. Sang, Y.Y. Chen and X.C. Xu (*Wuhan University of Science and Technology, China*)

Programme Schedule

Morning, November 7 ♦ Meeting Room 5

(08:00 ~ 09:45)

UHTC & MAX Phase Workshop 2017

Chair: J.X. Liu (*Donghua University, China*)

- 08:00 B2-007 **Eutectic composites of carbide and boride prepared by arc melting**
Invited R. Tu¹, Q.Z. Li¹, S. Zhang¹, M.J. Yang¹, T. Goto² and L.M. Zhang¹ (¹Wuhan University of Technology, China; ²Tohoku University, Japan)
- 08:25 SB2-102 **Core-rim structure and inhomogeneous solid-solution as indicator for phase evolution and microstructure development in multi-phased ultra-high temperature ceramics**
H. Gu (*Shanghai University, China*)
- 08:45 SB4-105 **Ablation behaviors of vacuum plasma sprayed ZrC-MoSi₂ coatings**
T. Liu, Y.R. Niu, X.B. Zheng and C.X. Ding (*Shanghai Institute of Ceramics, CAS, China*)
- 09:05 SB3-101 **Effects of ZrO₂ on the densification of ZrB₂ ceramics with polymer-derived SiBCN as sintering aid**
B. Feng, Y. Zhang, S.J. Hu and G.Q. Song (*Beihang University, China*)
- 09:25 SB4-102 **Preparation and properties of HfB₂ ultra high temperature ceramic fabricated by reactive spark plasma sintering**
H.L. Wang¹, S.C. Ma¹, X.T. Zhao¹ and R. Zhang² (¹Zhengzhou University, China; ²Zhengzhou University of Aeronautics, China)

(09:55 ~ 12:00)

UHTC & MAX Phase Workshop 2017

Chair: C.F. Hu (*Southwest Jiaotong University, China*)

- 09:55 A4-002 **Flash spark plasma sintering for ultra-rapid consolidation of ceramics**
Invited S. Grasso¹, C.F. Hu¹, T. Saunders², E.G. Castle², P. Tatarko², M. Reece², J. Binner³, J. Zou³, M. Fides⁴, R. Sedláč⁴, T. Csanádi⁴, V. Girman⁴, P. Hvizdos⁴ and J. Dusza⁴ (¹Southwest Jiaotong Univ., China; ²Queen Mary Univ. of London, UK; ³Univ. of Birmingham, UK; ⁴Slovak Academy of Sciences, Slovakia)
- 10:20 SB4-101 **Microstructure and properties of low temperature reactive infiltrated W-ZrC composites**
D. Wang, L. Chen, Y.J. Wang, S.J. Huo, B.X. Wei and Y. Zhou (*Harbin Institute of Technology, China*)
- 10:40 B2-104 **Monolithic zirconium diboride/silicon carbide composite aerogels via direct drying process**
F. Li and X. Huang (*Shanghai Institute of Ceramics, CAS, China*)
- 11:00 SB6-103 **Reactive hot-pressed ZrB₂-SiC-BN ceramics with improved thermal shock resistance**
J.X. Liu and G.J. Zhang (*Donghua University, China*)
- 11:20 SB6-102 **Synergetic roles of ZrC and SiC on tailoring of microstructures and mechanical properties in ternary ZrB₂-SiC-ZrC ceramic**
H.L. Liu¹, J.X. Liu and G.J. Zhang² (¹Shaanxi University of Science & Technology, China; ²Donghua University, China)
- 11:40 SB6-101 **Mechanical and ablation properties of hot-pressed Si-B-C-N-Zr monoliths**
Q.S. Zhu, B. Liang, Z.H. Yang, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)

Morning, November 7 ♦ Meeting Room 6

(08:00 ~ 10:00)

Electrical Ceramics and Their Applications

Chair: J. Yu (*Donghua University, China*)

- 08:00 C1-103 **Doping effects of Al₂O₃ on the sintering behavior and microwave dielectric properties of Li₂ZnTi₃O₈ ceramics**
J.Q. Ren^{1,2}, X.L. Fu¹ and Z.J. Peng² (¹*Beijing University of Posts and Telecommunications, China*; ²*China University of Geosciences, China*)
- 08:20 C2-111 **Structural, electrical, and photoluminescence properties of Sm³⁺ doped Na_{0.5}La_{0.5}Bi_{8-x}Sm_xTi₇O₂₇ ceramics**
P.B. Wang, X.P. Jiang, C. Chen, Y.L. Jiang, X. Xia, Y.J. Chen, N. Tu and G. Fan (*Jingdezhen Ceramic Institute, China*)
- 08:40 C5-105 **Lattice dynamics and phonon characteristics of complex perovskite microwave ceramics**
F. Shi (*Shandong University of Science and Technology, China*)
- 09:00 C5-108 **The influence of BBZ glass on phase evolution, sintering behavior and dielectric properties of BaTi₄O₉ ceramics**
H.S. Ren¹, T.Y. Xie^{1,2}, M.Z. Dang¹, X.G. Yao¹, H.X. Lin¹ and L. Luo¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Chongqing Univ. Technol., China*)
- 09:20 C5-114 **Structural phase transition and microwave dielectric properties in A/B-site substituted LaTiNbO₆ ceramics**
J. Zhang and R.Z. Zuo (*Hefei University of Technology, China*)
- 09:40 C5-115 **Ultrahigh Q values and atmosphere-controlled sintering of Li_{2(1+x)}Mg₃ZrO₆ microwave dielectric ceramics**
W.Q. Liu, J. Song, J. Zhang and R.Z. Zuo (*Hefei University of Technology, China*)

(10:10 ~ 11:50)

Electrical Ceramics and Their Applications

Chair: Z.J. Peng (*China University of Geosciences, China*)

- 10:10 C1-110 **Synthesis of Sr-Bi-Mn-O manganate composites by sol-gel method and their phase structures**
H.J. Zhang, H. Ke, L.W. Zhang, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)
- 10:30 C6-104 **Preparation and antistatic properties of 3Y-TZP-doped AZO ceramic**
J.C. Shen, H. Liu, J.T. Zhao, L. Dong, C. Wang and H.T. Yang (*Shenzhen University, China*)
- 10:50 C4-101 **Sintering and characterization of Nb-Al co-doped ZnO targets**
C. Wang, L. Dong, J.T. Zhao, J.C. Shen, H. Liu and H.T. Yang (*Shenzhen University, China*)
- 11:10 C5-104 **Investigation of Sm³⁺ and Ho³⁺ co-doped Ni-Zn ferrite functional ceramics**
Z.Q. Liu^{1,2}, Z.J. Peng¹, C.C. Lv¹ and X.L. Fu² (¹*China University of Geosciences, China*; ²*Beijing University of Posts and Telecommunications, China*)
- 11:30 Z0-101 **Investigation on magnetoviscous effects of water-based magnetic fluid by rheometer**
Z.L. Zhang, L. Bai, Z.K. Li, Y. Yang and D.C. Li (*Beijing Jiaotong Univ., China*)

Programme Schedule

Morning, November 7 ♦ Meeting Room 7

(08:00 ~ 09:55)

Ceramics for Optical Applications

Chair: Y.Q. Wu (*Alfred University, USA*)

- 08:00 H5-005 **New trends of optical ceramics**
Invited A. Ikesue (*World-Lab. Co., Japan*)
- 08:25 H5-001 **New synthesis path of ultra-transparent fluoride ceramics for laser applications**
Invited M. Mortier (*PSL Research University, France*)
- 08:50 H5-003 **Oxide ceramics and composites for hypersonic infrared windows and domes**
Invited X.J. Mao^{1,2}, L. Zhang¹ and S.W. Wang² (¹*Shanghai Institute of Optics and Fine Mechanics, CAS, China*; ²*Shanghai Institute of Ceramics, CAS, China*)
- 09:15 H5-103 **Preparation and application of YAG/GGAG ceramics as optical medium**
H.M. Qin, X.Q. Chen, S.W. Feng, J. Jiang and H.C. Jiang (*Ningbo Institute of Materials Technology and Engineering, CAS, China*)
- 09:25 SE2-101 **Transparent YAG-based nanoceramics via pressureless glass crystallization**
X.G. Ma^{1,2}, X.Y. Li¹, J.Q. Li¹, B.Q. Ma, C. Genevois³, E. Véron⁴, A. Etienne³ and M. Allix⁴ (¹*Institute of Process Engineering, CAS, China*; ²*China Univ. Geosciences Beijing, China*; ³*Normandie Univ., France*; ⁴*Univ. Orléans, France*)

(10:05 ~ 12:00)

Ceramics for Optical Applications

Chair: X.J. Mao (*Shanghai Institute of Ceramics, CAS, China*)

- 10:05 H5-002 **Fundamental studies on transparency of ceramic materials**
Invited Y.Q. Wu (*Alfred University, USA*)
- 10:30 B7-001 **Tailoring crystallization in oxide glasses: application to transparent polycrystalline ceramics and nanostructured glass-ceramics**
Invited M. Allix, C. Genevois, E. Véron and F. Fayon¹ (*CEMHTI, Orléans, France*)
- 10:55 H5-004 **High strength transparent polycrystalline spinel ceramics fabricated by SPS technique**
Invited K. Morita, B.N. Kim, H. Yoshida, K. Hiraga and Y. Sakka (*National Institute for Materials Science, Japan*)
- 11:20 H2-102 **The effect of sintering aid MgO on the microstructure and optical properties in TAG transparent ceramics**
S.Y. Zhang¹, P. Liu¹, X.D. Xu¹ and J. Zhang² (¹*Jiangsu Normal University, China*; ²*Shanghai Institute of Ceramics, CAS, China*)
- 11:40 H5-110 **MgO·nAl₂O₃ spinel transparent ceramic prepared by reactive sintering using γ -Al₂O₃ and MgO**
D. Han¹, J. Zhang¹, P. Liu² and S.W. Wang¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Jiangsu Normal University, China*)

Programme Schedule

Morning, November 7 ♦ Meeting Room 8

(08:00 ~ 10:00)

Advanced Processing and Manufacturing Technologies

Chair: F. Chen (*Wuhan University of Technology, China*)

- 08:00 A1-001** **Fabrication of highly structure-controlled ceramics by advanced powder processing**
Invited
Y. Sakka (*National Institute for Materials Science, Japan*)
- 08:25 A1-002** **Surface modification of fine ceramic powders for functional applications**
Invited
J.F. Zhang (*Hohai University, China*)
- 08:50 A1-111** **Aluminum nitride powders made from a wet chemical pathway with solid nitrogen-containing organic compounds as the nitrogen source**
Y.L. Cheng, X. Huang and H.T. Lin (*Guangdong University of Technology, China*)
- 09:10 A1-113** **Direct synthesis of oxynitride compound without ammonia**
S.L. Chen¹, S.K. Sun^{1,2}, W.M. Guo¹ and H.T. Lin¹ (¹*Guangdong University of Technology, China*; ²*The University of Sheffield, UK*)
- 09:30 A1-116** **Preparations and characterizations of γ -Ce₂S₃ red pigments from Pr-doped CeO₂ with improved thermal stabilities**
Y.Q. Gao^{1,2}, Y.M. Li¹, Z.M. Wang¹, Z.Y. Shen¹ and Z.X. Xie¹ (¹*Jingdezhen Ceramic Institute, China*; ²*Guizhou University, China*)

(10:00 ~ 11:50)

Advanced Processing and Manufacturing Technologies

Chair: J.F. Zhang (*Hohai University, China*)

- 10:00 A4-001** **Electrical field effects in spark plasma sintering and flash sintering: stoichiometry, microstructural gradients and kinetic enhancement**
Invited
M. Colonna (*European Commission, Joint Research Centre, Germany*)
- 10:25 A4-003** **Industrial applications of direct current based spark plasma/field assisted sintering; large components and uniformity**
Invited
R. Aalund (*Luke S. Walker, Thermal Technology, USA*)
- 10:50 I4-101** **SnO₂ nanoparticles synthesis and nanostructuring of dense ceramics by spark plasma sintering**
F. Delorme¹, R. Dujardin¹, F. Schoenstein², B. Pintault³, P. Belleville³, C. Autret¹, I. Monot-Laffez¹ and F. Giovannelli¹ (¹*Université François Rabelais de Tours, France*; ²*Université Paris 13, France*; ³*CEA-DAM Le Ripault, France*)
- 11:10 E1-106** **Low-temperature sintering of porous silicon carbide ceramics with H₃PO₄ as an additive**
T. Gu, F. Chen, Q. Shen and L.M. Zhang (*Wuhan University of Technology, China*)
- 11:30 A1-104** **Preparation of high purity α -Al₂O₃ particles derived from industrial waste solution via microwave calcining and seeding technique**
T.G. Zhao¹, H.X. Lu¹, Z.J. Zhang¹ and R. Zhang^{1,2} (¹*Zhengzhou University, China*; ²*Zhengzhou Institute of Aeronautical Industry Management, China*)

Afternoon, November 7 ♦ Meeting Room 0

(14:00 ~ 15:50)

Virtual Materials Design and Ceramic Genome

Chair: B. Liu (*Shanghai University, China*)

- 14:00 SA10-001 **Metal oxide surfaces: thermodynamics, environments, and spectroscopy**
Invited C.H. Xu and S.L. Hu (*China Academy of Engineering Physics, China*)
- 14:25 SA8-001 **Theoretical insights and predictions of ternary layered boride MoAlB using first-principles**
Invited Y.L. Bai¹, X.X. Qi¹, A. Duff², N. Li¹, F.Y. Kong¹, X.D. He¹, R.G. Wang¹ and W.E. Lee³ (¹*Harbin Institute of Technology, China*; ²*STFC Daresbury Laboratory, UK*; ³*Imperial College London, UK*)
- 14:50 SA3-101 **Theoretical investigation of mechanical and thermal properties of ABO₃ (A=Sr, Ba; B= Ti, Zr, Hf) perovskites**
Y.C. Liu, B. Liu and Y.F. Gao (*Shanghai University, China*)
- 15:10 SA6-101 **First principles investigation on the mechanical and thermal properties of α - and β -YAIB₄**
F.Z. Dai, Z.H. Feng and Y.C. Zhou (*Aerospace Research Institute of Materials & Processing Technology, China*)
- 15:30 SA6-102 **Theoretical explanation of the abnormal trend for the lattice thermal conductivity in RE₂SiO₅ (RE = Dy, Ho, Er, Tm, Yb and Lu)**
Y.R. Li and J.Y. Wang (*Institute of Metal Research, CAS, China*)

(16:00 ~ 17:10)

Virtual Materials Design and Ceramic Genome

Chair: F.X. Li (*Peking University, China*)

- 16:00 C2-006 **Novel perovskite-type $T_C > 500^\circ\text{C}$ piezoceramics designed with material genome approach**
Invited J. Yu (*Donghua University, China*)
- 16:25 C2-004 **Ceramics materials structures, energy and fractal frontiers**
Invited V.V. Mitic^{1,2} (¹*University of Nis, Serbia*; ²*Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia*)
- 16:50 C2-117 **First-principles investigation of Ba_{1-x}Sr_xTiO₃ ferroelectrics for energy storage application**
B.C. Luo, X.H. Wang and L.T. Li (*Tsinghua University, China*)

Afternoon, November 7 ♦ Meeting Room 1

(14:00 ~ 15:50)

Ceramics and Composites for Structural Applications

Chair: W.M. Guo (*Guangdong University of Technology, China*)

- 14:00 A2-001 **Single-source-precursor approach towards advanced silicon-based ceramic nanocomposites: synthesis, properties and applications**
Invited
Z.J. Yu (*Xiamen University, China*)
- 14:25 C6-002 **Electric conductivity and structure-property evolution of polymer-derived ceramics**
Invited
G. Shao¹, W.F. Peng¹, C. Ma¹, M.J. Jiang¹ and R. Zhang² (¹*Zhengzhou University, China*; ²*Zhengzhou University of Aeronautics, China*)
- 14:50 E2-107 **Fabrication and mechanical properties of mullite-bonded porous SiC ceramics via reaction-bonding technique**
Y.P. Zeng, S.F. Liu, S.Q. Ding and D.L. Jiang (*Shanghai Institute of Ceramics, CAS, China*)
- 15:10 E6-105 **Ultralight polymer-derived ceramic aerogels with wide bandwidth and effective electromagnetic absorption properties**
W.Y. Zhao¹, G. Shao^{1,2}, M.J. Jiang¹, C. Ma¹, B. Zhao² and R. Zhang^{1,2}
(¹*Zhengzhou University, China*; ²*Zhengzhou University of Aeronautics, China*)
- 15:30 E2-102 **Research of porous alumina with silicon carbide: a high temperature heat insulation material**
S.J. Hu, B. Feng, X.X. Tang, G.Q. Song, C. Chen, L.N. Deng and Y. Zhang
(*Beihang University, China*)

(16:00 ~ 17:40)

Ceramics and Composites for Structural Applications

Chair: G. Shao (*Zhengzhou University, China*)

- 16:00 B2-102 **Rheological behaviors of calcium aluminate cement-hydratable alumina bonded corundum-spinel castable suspensions with different dispersants**
M.F. Cai, Y.H. Liang, Y.C. Yin, J.H. Nie and Y.L. Guo (*Wuhan University of Science and Technology, China*)
- 16:20 B6-113 **Effect of alkali activator on properties of lightweight tailings material**
S.T. Ge, Y.B. Bi, J.K. Wang, S.S. Li and H.J. Zhang (*Wuhan University of Science and Technology, China*)
- 16:40 B6-115 **Fabrication and properties of coal fly ash-derived ceramic proppants**
S.Q. Ding, G.G. Gao, X.G. Li and J. Jow (*National Institute of Clean-and-Low-Carbon Energy, China*)
- 17:00 B6-118 **Effects of fine calcined alumina powders on properties of alumina-magnesia castables with TiO₂ additions**
W.J. Yuan, H. Tang and Y.H. Zhou (*Wuhan University of Science and Technology, China*)
- 17:20 A1-120 **Molten salt synthesis of plate-like MgAl₂O₄ spinel and its formation mechanism**
X.L. Hou¹, J.T. Huang^{1,2}, M. Zhang¹, Z.J. Feng¹, Z.H. Hu¹, X.B. Li¹ and J.M. Luo¹
(¹*Nanchang Hangkong University, China*; ²*Wuhan University of Science and Technology, China*)

Afternoon, November 7 ♦ Meeting Room 2

(13:55 ~ 16:05)

Bioceramics and Biocomposites

Chair: S. Cai (*Tianjin University, China*)

- | | | |
|-------|-------------------|---|
| 13:55 | D6-001
Invited | Rare earth doped hydroxyapatite luminescent nanocrystals as <i>in vitro</i> and <i>in vivo</i> bioimaging agent
<u>Y.C. Han</u> , Q.G. Xing, W.M. He and H.L. Dai (<i>Wuhan Univ. Technol., China</i>) |
| 14:25 | D5-101 | Patient-specific printing of bioresorbable and biocompatible ceramics by lithography-based ceramic manufacturing
<u>J. Homa</u> , D. Bomze and M. Schwentenwein (<i>Lithoz GmbH, Austria</i>) |
| 14:45 | D5-102 | Angiogenesis of strontium-containing calcium phosphate cement with optimized mechanical properties for femoral head osteonecrosis
<u>C.X. Gao</u> , H.L. Liu, H.L. Yang and L. Yang (<i>Soochow University, China</i>) |
| 15:05 | D7-101 | Microstructure and mechanical properties of nano-structured HA/TiO₂ graded coatings prepared by high velocity suspension flame spraying (HVSFS)
<u>H.L. Yao</u> , Y.L. Zou, G.C. Ji, X. Chen, X.B. Bai and Q.Y. Chen (<i>Jiujiang University, China</i>) |
| 15:25 | D7-102 | Toughening mechanisms in a natural ceramic with a crossed-lamellar structure
<u>H.M. Ji</u> ^{1,2} , X.W. Li ¹ and D.L. Chen ² (¹ <i>Northeastern University, China</i> ; ² <i>Ryerson University, Canada</i>) |
| 15:45 | D7-103 | Microstructures and mechanical behavior of a deep-sea shell of <i>Chambered Nautilus</i>
<u>S.M. Liang</u> , H.M. Ji and X.W. Li (<i>Northeastern University, China</i>) |

(16:30 ~ 18:00)

Special Lecture

Publishing Papers in American Ceramic Society Journals

W.G. Fahrenholtz (*Editor-in-Chief, Journal of the American Ceramic Society*)

This presentation will provide advice for graduate students and early career researchers on publishing papers in the Journal of the American Ceramic Society (JACerS), the International Journal of Applied Ceramic Technology (IJACT), and the International Journal of Applied Glass Science (IJAGS). The presentation will cover the basics of selecting the proper journal, preparing a manuscript, and revising manuscripts using comments from the peer-review process.

Programme Schedule

Afternoon, November 7 ♦ Meeting Room 3

(14:00 ~ 15:30)

企业新产品、新技术发布会

- 14:00 中环
- 14:30 江西赛瓷
- 15:00 复纳科学仪器 (上海) 有限公司

(15:40 ~ 17:40)

Ceramic Coatings for Structural and Functional Applications

Chair: S. Zhang (*Wuhan University of Technology, China*)

- 15:40 G2-106 **Hot corrosion behavior of Nb₂O₅-SiO₂/NbSi₂/Nb₅Si₃ multilayer coating on Nb-Hf alloy**
Y.L. Ge, Y.M. Wang, Y.C. Zou, Y.F. Wu, G.L. Chen, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)
- 16:00 G3-103 **Preparation of a polysiloxane/60%SiO₂ hybrid coating on Kapton and its atomic oxygen erosion and vacuum ultraviolet resistance**
H. Qi, Y.H. Qian, J. Zuo, J.J. Xu and M.S. Li (*Institute of Metals Research, CAS, China*)
- 16:20 G3-105 **Preparation of β-SiC coatings on inner surface of graphite tube by halide CVD**
X. Zhang¹, M.X. Han², S. Zhang¹, R. Tu¹, T. Goto³ and L.M. Zhang¹ (¹*Wuhan University of Technology, China*; ²*IBIDEN Co. Ltd., Japan*; ³*Tohoku University, Japan*)
- 16:40 G3-106 **Effect of hydrogen flow on the defects in 3C-SiC epitaxial films by laser CVD**
Z.Z. Liu¹, P.P. Zhu¹, S. Zhang¹, R. Tu¹, L.M. Zhang¹ and T. Goto² (¹*Wuhan University of Technology, China*; ²*Tohoku University, Japan*)
- 17:00 G5-102 **Orientation and microstructure control of 3C-SiC epitaxial films on Si (110) by laser chemical vapor deposition**
Q.Y. Sun¹, P.P. Zhu¹, S. Zhang¹, R. Tu¹, T. Goto² and L.M. Zhang¹ (¹*Wuhan University of Technology, China*; ²*Tohoku University, Japan*)
- 17:20 G7-102 **Growth mechanism of microarc oxidation coatings on Al alloy and strategies to obtain functional performances**
Y.M. Wang, Y.C. Zou, G.L. Chen, S.Q. Wang, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)

Afternoon, November 7 ♦ Meeting Room 5

(14:00 ~ 15:50)

Thermal and Environmental Barrier Coatings

Chair: X.Q. Cao (*Wuhan University of Technology, China*)

- 14:00 G1-004 **Sintering induced stiffening behavior of lamellar thermal barrier coatings**
Invited G.J. Yang (*Xi'an Jiaotong University, China*)
- 14:25 G1-003 **Investigation on structure optimizing and heat insulating capability of thermal barrier coatings for shielding thermal radiation**
Invited L. Liu, Z. Ma, S.Z. Zhu and D.Y. Wang (*Beijing Institute and Technology, China*)
- 14:50 G1-102 **Sintering induced the failure behavior of dense vertically crack and lamellar structured TBCs with equivalent thermal insulation performance**
B. Cheng, N. Yang, Q. Zhang, M. Zhang, Y.M. Zhang, L. Chen, G.J. Yang, C.X. Li and C.J. Li (*Xi'an Jiaotong University, China*)
- 15:10 G1-104 **Stoichiometry and phase evolution in magnetron sputtered holmium silicate coatings**
W.P. Hu^{1,2}, J. Zhang¹ and J.Y. Wang¹ (¹*Institute of Metal Research, CAS, China*; ²*University of Science and Technology of China, China*)
- 15:30 G1-103 **Strain-induced stiffness-dependent structural changes and the associated failure mechanism in TBCs**
G.R. Li, B. Cheng, G.J. Yang, C.X. Li and C.J. Li (*Xi'an Jiaotong University, China*)

(16:00 ~ 17:50)

Thermal and Environmental Barrier Coatings

Chair: G.J. Yang (*Xi'an Jiaotong University, China*)

- 16:00 G1-005 **Effects of heat treatment on microstructures and properties of plasma-sprayed lanthanum hexaluminum coatings**
Invited J.B. Sun, J.S. Wang, X. Zhou, L.H. Deng, J.N. Jiang and X.Q. Cao (*Wuhan University of Technology, China*)
- 16:25 G1-001 **Hot gas corrosion and environmental barrier coating development for non-oxide ceramic material**
Invited H. Klemm, W. Kunz, B. Gronde and K. Schönfeld (*Fraunhofer-Institut für Keramische Technologien und Systeme IKTS, Germany*)
- 16:50 G1-108 **Microstructure evolution and thermomechanical properties of plasma-sprayed Yb₂SiO₅ coating during thermal aging**
Y.R. Niu¹, X. Zhong^{1,2}, H. Li², X.B. Zheng¹ and C.X. Ding¹ (¹*Shanghai Institute of Ceramics, CAS, China*; ²*Shanghai University, China*)
- 17:10 B1-142 **Mechanical properties of LaYb(Ce_xZr_{1-x})₂O₇ for thermal barrier coatings**
M. Wang^{1,2}, J. Yang², X.C. Lai¹, Z.Y. Wang² and W. Pan² (¹*China Academy of Engineering Physics, China*; ²*Tsinghua University, China*)
- 17:30 G1-105 **Synthesis and thermal physics properties of RETa₃O₉ (RE=Ce, Nd, Sm, Eu, Gd, Dy, Er) as promising thermal barrier coatings**
L. Chen, Y.H. Jiang, X.Y. Chong and J. Feng (*Kunming University of Science and Technology, China*)

Programme Schedule

Afternoon, November 7 ♦ Meeting Room 6

(14:00 ~ 15:50)

Semiconductors for LED/LD, Power Device and Sensor

Chair: Z.F. Liu (*Shanghai Institute of Ceramics, CSA, China*)

- 14:00 H1-001 **GeSn and related group-IV alloy thin films for future Si nanoelectronics**
Invited O. Nakatsuka, M. Kurosawa, W. Takeuchi, M. Sakashita and S. Zaima (*Nagoya University, Japan*)
- 14:25 H1-002 **Highly conducting electrodes manufactured by printed in ion-ink and nanowires**
Invited Y.J. Oh^{1,2} and B.W. Wang¹ (¹*Korea Institute of Science and Technology, Korea*; ²*University of Science and Technology, Korea*)
- 14:50 H1-101 **Elimination of double position domains (DPDs) in epitaxial <111>-3C-SiC on Si(111) by laser CVD**
Q.F. Xu¹, P.P. Zhu¹, R. Tu¹, M.J. Yang¹, S. Zhang¹, L.M. Zhang¹, T. Goto², J.S. Yan³ and S.S. Li³ (¹*Wuhan University of Technology, China*; ²*Tohoku University, Japan*; ³*Tech Semiconductors, Ltd., China*)
- 15:10 H1-102 **Preparation of luminescent glass used in white LED by SPS**
P. Huang, B.Y. Zhou, S.J. Gu, W. Jiang and L.J. Wang (*Donghua University, China*)
- 15:30 H1-103 **Stacked quantum dots embedded in silica glass by spark plasma sintering for white light-emitting diodes**
B.Y. Zhou, P. Huang, L.J. Wang and W. Jiang (*Donghua University, China*)

(16:00 ~ 17:50)

Semiconductors for LED/LD, Power Device and Sensor

Chair: Q.Y. Fu (*Huazhong University of Science and Technology, China*)

- 16:00 C6-001 **Nanostructured glass ceramics: controllable crystallization and their promising application in optical thermometry**
Invited D.Q. Chen, Z.Y. Wan, S. Liu and X.Y. Li (*Hangzhou Dianzi University, China*)
- 16:25 C5-002 **Multilayered ceramic devices based on low temperature cofired ceramics (LTCC) process**
Invited Z.F. Liu and Y.X. Li (*Shanghai Institute of Ceramics, CAS, China*)
- 16:50 C5-112 **Wireless passive pressure sensors based on LTCC technology**
L. Lin, M.S. Ma, F.Q. Zhang, F. Liu, Z.F. Liu and Y.X. Li (*Shanghai Institute of Ceramics, CAS, China*)
- 17:10 C6-101 **Nanostructure and properties of TiO₂-SnO₂ composites for ammonia sensors**
A. Marzec¹, Z. Pedzich¹ and W. Maziarz² (¹*AGH University of Science and Technology, Poland*; ²*Institute of Metallurgy and Materials Science of Polish Academy of Sciences, Poland*)
- 17:30 C6-102 **Contrasting room-temperature hydrogen sensing behaviors of Pt-WO₃ composite ceramics sintered at different temperatures**
P.C. Li¹, C.B. Song¹, Y. Liu¹, S. Zhu¹, L.Q. Xu², Z. Zhou² and W.P. Chen¹ (¹*Wuhan Univ., China*; ²*Huaneng Wuhan Power Generation Co., Ltd., China*)

(14:00 ~ 15:45)

Ceramics for Optical Applications

Chair: D.Q. Chen (*Hangzhou Dianzi University, China*)

- 14:00 H6-001 Invited** **Controlled crystallization of $\text{Ln}_2(\text{OH})_4\text{SO}_4 \cdot n\text{H}_2\text{O}$ layered compounds for the green synthesis of oxysulfate and oxysulfide phosphors**
J.G. Li^{1,2}, X.J. Wang³ and X.D. Sun² (¹*National Institute for Materials Science, Japan*; ²*Northeastern University, China*; ³*Bohai University, China*)
- 14:25 H2-101** **Luminescence properties of the red-emitting phosphor $\text{Sr}_2\text{Si}_5\text{N}_8:\text{Yb}^{2+}$ prepared by plasma activated sintering**
H.L. Yuan, Z.F. Huang, F. Chen, Q. Shen and L.M. Zhang (*Wuhan University of Technology, China*)
- 14:45 H5-101** **Influence of $\text{La}(\text{OH})_3$ addition on the microstructure, transmittance and upconversion luminescence of $\text{Y}_2\text{O}_3:\text{Er}^{3+}$ translucent ceramics prepared using $\text{YOF}:\text{Er}^{3+}$ nanopowders**
Y.Y. Guo¹, D.Y. Wang², X.H. Wu^{1,2}, Q.K. Wang², F. Wang², X.B. Bai² and Y. He¹ (¹*China University of Geosciences (Wuhan), China*; ²*Jiujiang University, China*)
- 15:05 H6-104** **Green synthesis and NIR-NIR up-conversion photoluminescence of $(\text{La}_{0.97}\text{Tm}_{0.01}\text{Yb}_{0.02})_2\text{O}_2\text{S}$ oxysulfide and $(\text{La}_{0.97}\text{Tm}_{0.01}\text{Yb}_{0.02})_2\text{O}_2\text{SO}_4$ oxysulfate phosphors**
X.J. Wang¹, J.G. Li² and Q. Zhu² (¹*Bohai University, China*; ²*Northeastern University, China*)
- 15:25 H6-106** **The synthesis, crystal structure and photoluminescence of $\text{Ce}^{3+}/\text{Mn}^{2+}$ co-doped eulytite-type $\text{Ba}_3\text{La}(\text{PO}_4)_3$ phosphors**
W.G. Liu¹, H.N. Zhang¹, Q. Zhu¹ and J.G. Li^{1,2} (¹*Northeastern University, China*; ²*National Institute for Materials Science, Japan*)

(16:00 ~ 17:50)

Ceramics for Optical Applications

Chair: J.G. Li (*NIMS, Japan*)

- 16:00 H6-102** **Structure characterization and photoluminescence of ZnWO_4 nanorods synthesized via controlled hydrothermal reaction**
M.T. Li¹, Q. Zhu¹ and J.G. Li^{1,2} (¹*Northeastern University, China*; ²*National Institute for Materials Science, Japan*)
- 16:20 H6-103** **Enhancement of emission intensity of $\text{Sr}_2\text{Si}_5\text{N}_8:\text{Eu}^{2+}$ red-emitting phosphor by localized surface plasmon resonance of Ag nano-particles with different morphologies**
H. Zhong¹, J.Y. Tang¹, L.Y. Hao¹, X. Xu¹ and S. Agathopoulos² (¹*University of Science and Technology of China, China*; ²*University of Ioannina, Greece*)
- 16:40 H6-109** **Transparent ceramic of $\text{GAGG}:\text{Ce}^{3+}$ for high power LED applications**
Y.F. Liu, H.C. Jiang and J. Jiang (*Ningbo Institute of Materials Technology and Engineering, CAS, China*)
- 17:00 E4-102** **Novel single-phase full-color emitting $\text{Ba}_9\text{Lu}_2\text{Si}_6\text{O}_{24}:\text{Ce}^{3+}/\text{Mn}^{2+}/\text{Tb}^{3+}$ phosphors for white LED applications**
S.A. Khan¹, Z. Hao¹, W.W. Hu¹, L.Y. Hao¹, X. Xu¹, N.Z. Khan¹ and S. Agathopoulos² (¹*Univ. Sci. Technol. China, China*; ³*Univ. Ioannina, Greece*)
- 17:20 H6-111** **The Influence of hydrothermal temperature to the bore diameter of FDU-12**
Y.Y. Zhao, W. Jiang, L.J. Wang and W. Luo (*Donghua University, China*)

Programme Schedule

Afternoon, November 7 ♦ Meeting Room 8

(14:00 ~ 15:30)

Advanced Processing and Manufacturing Technologies

Chair: P. Colombo (*University of Padova, Italy*)

- 14:00 A6-002** **Toward rational design of 3D printing ceramics**
Invited Z. Zhao (*Shanghai Institute of Technology, China & KTH Royal Institute of Technology, Sweden*)
- 14:25 A6-001** **Digital light processing based additive manufacturing of ceramics**
Invited R.J. He, D. Liang and D.N. Fang (*Beijing Institute of Technology, China*)
- 14:50 A6-101** **Lithography-based additive manufacturing of casting cores for investment casting**
 J. Homa, P. Schneider and M. Schwentenwein (*Lithoz GmbH, Austria*)
- 15:10 A6-106** **Additive manufacturing of silicon nitride via continuous filament direct ink writing of aqueous ceramic suspensions**
 Y.T. Yang, Z.H. Yang, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)

(15:40 ~ 16:45)

Advanced Processing and Manufacturing Technologies

Chair: Z. Zhao (*Shanghai Institute of Technology, China*)

- 15:40 A5-001** **Microstructured ceramic inspired by nature**
 F. Bouville, H. Le Ferrand, T.P. Niebel and A.R. Studart (*ETH Zürich, Switzerland*)
- 16:05 A5-103** **A facile preparation of PANI/CS composites**
 H.H. Jia¹, J.H. Xiang¹, H.Z. Sai², Y.L. Guan¹, R. Fu¹, T. Zhang¹, H. Yang¹ and X. Yue¹ (¹*University of Chinese Academy of Sciences, China;* ²*Tsinghua University, China*)
- 16:25 A5-104** **The evaporation of molten droplet in open plasma jet of plasma spray-physical vapor deposition based on Bi-modal energy compensation mechanism of both heat transfer and self-cooling**
 M.J. Liu, M. Zhang, Q. Zhang, G.J. Yang, C.X. Li and C.J. Li (*Xi'an Jiaotong University, China*)

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Homa, J.	A6-101	Oral	Nov. 7	14:50	Room 8

Hou, Xiao-Long	A1-120	Oral	Nov. 7	17:20	Room 1
Hu, Chun-Feng	SB3-006	Invited	Nov. 6	10:25	Room 5
Hu, Min-Min	J3-101	Oral	Nov. 6	15:10	Room 8
Hu, Shuang-Lin	SA10-001	Invited	Nov. 7	14:00	Room 0
Hu, Shu-Juan	E2-102	Oral	Nov. 7	15:30	Room 1
Hu, Tao	J3-104	竞赛	Nov. 6	10:50	鑫顺翔
Hu, Wan-Peng	G1-104	Oral	Nov. 7	15:10	Room 5
Huang, Jun-Tong	B2-123	Oral	Nov. 7	11:20	Room 1
Huang, Ping	H1-102	Oral	Nov. 7	15:10	Room 6
Huang, Xiang	C2-120	Oral	Nov. 6	10:50	Room 6
Huang, Zhang-Yi	B1-137	Oral	Nov. 6	11:00	Room 1
Huang, Zhen-Ying	B3-104	Oral	Nov. 6	10:50	Room 5
Ikesue, A	H5-005	Invited	Nov. 7	08:00	Room 7
Jeon, J.H.	SD1-004	Invited	Nov. 6	08:55	Room 3
Ji, Hong-Mei	D7-102	Oral	Nov. 7	15:25	Room 2
Jia, De-chang	SF3-003	Invited	Nov. 6	10:00	Room 0
Jia, Huan-Huan	A5-103	Oral	Nov. 7	16:05	Room 8
Jia, Ling-Yu	SF2-101	Oral	Nov. 6	10:50	Room 0
Jiang, Feng	J1-104	Oral	Nov. 6	16:40	Room 8
Karaki, Tomoaki	C2-008	Invited	Nov. 6	09:20	Room 6
Kassiba, A.H.	I4-003	Invited	Nov. 6	08:25	Room 8
Khan, S.A.	E4-102	Oral	Nov. 7	17:00	Room 7
Kim, Byung-Nam	B1-001	Invited	Nov. 6	08:00	Room 1
Kim, I.J.	I1-101	Oral	Nov. 6	11:10	Room 8
Kim, I.J.	E1-001	Invited	Nov. 7	08:25	Room 3
Kong, Fan-Yu	J2-102	Oral	Nov. 6	15:30	Room 8
Koruza, J	SD2-002	Invited	Nov. 6	14:00	Room 3
Koumoto, K.	F1-002	Invited	Nov. 6	08:00	Room 7
Laasri, H.A.	C2-105	Oral	Nov. 6	16:50	Room 3
Lam, Kwok Ho	C1-002	Invited	Nov. 6	08:05	Room 6
Lee, Hyun-Young	SD1-103	Oral	Nov. 6	10:50	Room 3
Lee, Wei-Hao	SF6-101	Oral	Nov. 6	11:30	Room 0
Lei, Yi-Ming	SC4-101	Oral	Nov. 6	11:20	Room 2
Li, Chong	SB4-104	Oral	Nov. 6	17:35	Room 5
Li, Fa-Liang	B1-107	Oral	Nov. 7	11:00	Room 1
Li, Fang-Zhe	C2-113	Oral	Nov. 6	17:10	Room 3
Li, Fa-Xin	C2-002	Invited	Nov. 6	10:25	Room 6
Li, Fei	B2-104	Oral	Nov. 7	10:40	Room 5
Li, Guang-Rong	G1-103	Oral	Nov. 7	15:30	Room 5
Li, Guo-Rong	C2-010	Invited	Nov. 6	10:00	Room 6
Li, Hai-Liang	B2-133	Oral	Nov. 6	16:50	Room 1

Li, Ji-Guang	H6-001	Invited	Nov. 7	14:00	Room 7
Li, Jing-Feng	PL-008	Plenary	Nov. 5	11:20	
Li, Lan	B1-115	Oral	Nov. 6	09:10	Room 1
Li, Lin	E4-101	Oral	Nov. 7	11:25	Room 3
Li, Mei-Ting	H6-102	Oral	Nov. 7	16:00	Room 7
Li, Qi	I4-002	Invited	Nov. 6	08:00	Room 8
Li, Sai-Sai	I1-103	Oral	Nov. 6	09:30	Room 8
Li, Xiao-Yu	SE2-101	Oral	Nov. 7	09:35	Room 7
Li, Xi-Rui	SC3-002	Invited	Nov. 6	08:55	Room 2
Li, Yi-Ran	SA6-102	Oral	Nov. 7	15:30	Room 0
Li, Yu-Hong	SC2-001	Invited	Nov. 6	08:30	Room 2
Lian, Jian-Yun	C1-115	Oral	Nov. 6	11:30	Room 6
Liang, Si-Min	D7-103	Oral	Nov. 7	15:45	Room 2
Liang, Xiong	E6-103	Oral	Nov. 7	11:45	Room 3
Liao, Ning	B2-134	Oral	Nov. 6	17:10	Room 1
Liao, Ting	SA7-001	Invited	Nov. 7	10:25	Room 0
Liew, Yun Ming	SF4-002	Invited	Nov. 6	08:55	Room 0
Lin, Lin	C5-112	Oral	Nov. 7	16:50	Room 6
Ling, Rui	F4-107	竞赛	Nov. 6	09:30	鑫顺翔
Liu, Bin	SA5-002	Invited	Nov. 7	11:15	Room 0
Liu, Huan	F4-109	Oral	Nov. 6	15:30	Room 7
Liu, Hu-Lin	SB6-102	Oral	Nov. 7	11:20	Room 5
Liu, Ji-Xuan	SB6-103	Oral	Nov. 7	11:00	Room 5
Liu, Le-Ping	SF1-105	Oral	Nov. 6	15:10	Room 0
Liu, Ling	G1-003	Invited	Nov. 7	14:25	Room 5
Liu, Mei-Jun	A5-104	Oral	Nov. 7	16:25	Room 8
Liu, Qing	SD1-102	Oral	Nov. 6	14:50	Room 3
Liu, Tao	SB4-105	Oral	Nov. 7	08:45	Room 5
Liu, Tong	F5-102	Oral	Nov. 6	17:15	Room 7
Liu, Wei-Gang	H6-106	Oral	Nov. 7	15:25	Room 7
Liu, Wei-Qiong	C5-115	Oral	Nov. 7	09:40	Room 6
Liu, Yong-Fu	H6-109	Oral	Nov. 7	16:40	Room 7
Liu, Yu-Chen	SA3-101	Oral	Nov. 7	14:50	Room 0
Liu, Zhao-Cen	B2-124	Oral	Nov. 6	16:30	Room 2
Liu, Zhi-Zhuang	G3-106	Oral	Nov. 7	16:40	Room 3
Lou, Qi-Wei	C5-117	Oral	Nov. 6	15:30	Room 6
Lu, Xiao-Fang	F1-103	Oral	Nov. 6	10:55	Room 7
Lucas, Romian	B2-002	Invited	Nov. 6	16:25	Room 1
Luo, Bing-Cheng	C2-117	Oral	Nov. 7	16:50	Room 0
Luo, Ting-Ting	C5-113	竞赛	Nov. 6	08:40	鑫顺翔
Luohui, Jia-Dai	C2-114	竞赛	Nov. 6	08:30	鑫顺翔

MacLaren, I	C1-001	Invited	Nov. 6	16:00	Room 6
Malic, B.	SD2-003	Invited	Nov. 6	08:05	Room 3
Malic, B.	C2-009	Invited	Nov. 6	14:00	Room 6
Mao, Xiao-Jian	H5-003	Invited	Nov. 7	08:50	Room 7
Mao, Y.W.	SC1-105	Oral	Nov. 6	16:10	Room 2
Miao, Lei	F3-001	Invited	Nov. 6	11:15	Room 7
Mitic, V.V.	C2-004	Invited	Nov. 7	16:25	Room 0
Morita, K.	H5-004	Invited	Nov. 7	10:55	Room 7
Mortier, Michel	H5-001	Invited	Nov. 7	08:25	Room 7
Nakatsuka, O	H1-001	Invited	Nov. 7	14:00	Room 6
Nie, Xin	C2-121	Oral	Nov. 6	15:10	Room 6
Nishihori, Eiji	PL-004	Plenary	Nov. 5	16:20	
Niu, Ya-Ran	G1-108	Oral	Nov. 7	16:50	Room 5
Oh, Y.J.	H1-002	Invited	Nov. 7	14:25	Room 6
Ohji, T.	PL-005	Plenary	Nov. 5	13:30	
Ou, Yi-Xiang	F5-104	Oral	Nov. 6	17:35	Room 7
Ouyang, Jia-Hu	B1-130	Oral	Nov. 6	10:40	Room 1
Park, Chul Hong	C2-005	Invited	Nov. 6	08:55	Room 6
Partyka, J.	B7-101	Oral	Nov. 7	08:50	Room 1
Pedzich, Z.	C6-101	Oral	Nov. 7	17:10	Room 6
Pyda, W.	B1-105	Oral	Nov. 6	08:50	Room 1
Qi, He	SD3-101	Oral	Nov. 6	17:30	Room 3
Qi, Hong	G3-103	Oral	Nov. 7	16:00	Room 3
Qi, Jian-Qi	SC1-001	Invited	Nov. 6	14:50	Room 2
Qin, Hai-Ming	H5-103	Oral	Nov. 7	09:15	Room 7
Qiu, Bao-Fu	B2-135	Oral	Nov. 7	10:40	Room 1
Reimanis, IE	F5-001	Invited	Nov. 6	16:00	Room 7
Ren, Hai-Shen	C5-108	Oral	Nov. 7	09:00	Room 6
Ren, Jun-Qing	C1-103	Oral	Nov. 7	08:00	Room 6
Riedel, Ralf	PL-007	Plenary	Nov. 5	10:00	
Rosei, F.	PL-003	Plenary	Nov. 5	15:40	
Sajgalik, P.	B2-006	Invited	Nov. 6	14:00	Room 1
Sakka, Y.	A1-001	Invited	Nov. 7	08:00	Room 8
Sang, Zhi-Yuan	F4-106	竞赛	Nov. 6	09:20	鑫顺翔
Schonfeld, K.	G1-001	Invited	Nov. 7	16:25	Room 5
Sciti, D	SB2-005	Invited	Nov. 6	16:50	Room 5
Shao, Gang	C6-002	Invited	Nov. 7	14:25	Room 1
Shen, Jin-Cheng	C6-104	Oral	Nov. 7	10:30	Room 6
Shen, Zong-Yang	SD2-004	Invited	Nov. 6	16:00	Room 3
Shi, Feng	C5-105	Oral	Nov. 7	08:40	Room 6
Shih, Chunghao	SC1-002	Invited	Nov. 6	08:05	Room 2

Shui, An-Ze	E1-107	Oral	Nov. 7	10:45	Room 3
Song, Jun-Jie	B1-129	Oral	Nov. 6	10:20	Room 1
Song, Yuan-Yuan	B5-101	Oral	Nov. 6	11:40	Room 1
Su, Hui	J1-106	Oral	Nov. 6	16:20	Room 8
Sun, Qing-Yun	G5-102	Oral	Nov. 7	17:00	Room 3
Sun, SK	SC3-001	Invited	Nov. 6	14:00	Room 2
Sun, Yang-Shan	B7-103	Oral	Nov. 7	09:10	Room 1
Sun, Zheng-Ming	SB3-002	Invited	Nov. 6	08:30	Room 5
Sun, Ziqi	J1-001	Invited	Nov. 6	14:25	Room 8
Suvorov, D.	C5-001	Invited	Nov. 6	08:30	Room 6
Tatsuoka, H	I1-001	Invited	Nov. 6	14:00	Room 8
Traversa, E	F5-003	Invited	Nov. 6	16:25	Room 7
Tu, Rong	B2-007	Invited	Nov. 7	08:00	Room 5
Valcarcel, V	B1-002	Invited	Nov. 6	08:25	Room 1
Verdeperre, L.	SB3-007	Invited	Nov. 6	16:00	Room 5
Wan, Chun-Lei	F1-005	Invited	Nov. 6	08:25	Room 7
Wang, Chang-An	F4-001	Invited	Nov. 6	14:00	Room 7
Wang, Chen	C4-101	Oral	Nov. 7	10:50	Room 6
Wang, Dong	SB4-101	Oral	Nov. 7	10:20	Room 5
Wang, Hai-Liang	I5-105	Oral	Nov. 6	16:50	Room 2
Wang, Hai-Long	SB4-102	Oral	Nov. 7	09:25	Room 5
Wang, Jing-Yang	SA5-001	Invited	Nov. 7	10:00	Room 0
Wang, Jun-Kai	I1-102	Oral	Nov. 6	17:40	Room 8
Wang, Jun-Wei	E6-101	Oral	Nov. 7	09:10	Room 3
Wang, Ke	SD3-001	Invited	Nov. 6	14:25	Room 3
Wang, Mei-Ling	SF2-102	Oral	Nov. 6	15:30	Room 0
Wang, Min	B2-142	Oral	Nov. 7	17:10	Room 5
Wang, Peng-Bin	C2-111	Oral	Nov. 7	08:20	Room 6
Wang, Qi	G7-101	竞赛	Nov. 6	09:50	鑫顺翔
Wang, Qing-Heng	E2-104	Oral	Nov. 7	09:30	Room 3
Wang, Rui-Fei	SF7-101	Oral	Nov. 6	15:50	Room 0
Wang, Shi-Tong	F4-002	Invited	Nov. 6	14:25	Room 7
Wang, Xue-Jiao	H6-104	Oral	Nov. 7	15:05	Room 7
Wang, Y.	SC7-102	Oral	Nov. 6	10:40	Room 2
Wang, Ya-Ming	G7-102	Oral	Nov. 7	17:20	Room 3
Wang, Yi-Tian	A6-106	Oral	Nov. 7	15:10	Room 8
Wang, Yong-Xin	C2-116	Oral	Nov. 6	17:10	Room 6
Wang, Yu	PL-009	Plenary	Nov. 5	17:00	
Wang, Zhi-Gang	B1-125	Oral	Nov. 6	09:30	Room 1
Weber, W.J.	PL-006	Plenary	Nov. 5	14:50	
Winnubst, L.	E4-001	Invited	Nov. 7	08:00	Room 3

Wu, Hui	I1-003	Invited	Nov. 6	10:00	Room 8
Wu, Ling-Hao	E2-101	Oral	Nov. 7	11:05	Room 3
Wu, Li-Xiang	B2-117	Oral	Nov. 6	15:30	Room 1
Wu, Y.Q.	H5-002	Invited	Nov. 7	10:05	Room 7
Xiang, Hui-Min	SA9-001	Invited	Nov. 7	10:50	Room 0
Xiao, Tian-Tian	F6-102	竞赛	Nov. 6	09:40	鑫顺翔
Xie, Wang	I1-105	Oral	Nov. 6	10:50	Room 8
Xing, Qing-Guo	H6-101	竞赛	Nov. 6	10:40	鑫顺翔
Xu, C.	SC1-104	Oral	Nov. 6	10:00	Room 2
Xu, C.H.	SC6-101	Oral	Nov. 6	11:00	Room 2
Xu, Chen-Hong	F6-104	Oral	Nov. 6	11:40	Room 7
Xu, Lu-Di	SB3-102	Oral	Nov. 6	11:30	Room 5
Xu, Qing-Fang	H1-101	Oral	Nov. 7	14:50	Room 6
Xu, Yang-Yang	H5-104	竞赛	Nov. 6	10:00	鑫顺翔
Yang, Guan-Jun	G1-004	Invited	Nov. 7	14:00	Room 5
Yang, Hu	E1-104	Oral	Nov. 7	10:25	Room 3
Yang, Hui	L-001	Oral	Nov. 6	15:30	Room 2
Yang, Lei	D5-102	Oral	Nov. 7	14:45	Room 2
Yang, Ming-Ye	E3-101	Oral	Nov. 7	08:50	Room 3
Yang, Wei-Yi	I4-105	Oral	Nov. 6	09:10	Room 8
Yang, Wei-You	I1-002	Invited	Nov. 6	10:25	Room 8
Yao, Hai-Long	D7-101	Oral	Nov. 7	15:05	Room 2
Yin, Jie	B2-004	Invited	Nov. 6	15:15	Room 5
Yoon, D.H.	B2-001	Invited	Nov. 6	16:00	Room 1
Yu, Jian	C2-006	Invited	Nov. 7	16:00	Room 0
Yu, Jun-Jie	B2-119	Oral	Nov. 6	17:30	Room 1
Yu, Zhao-Ju	A2-001	Invited	Nov. 7	14:00	Room 1
Yuan, Hai-Long	H2-101	Oral	Nov. 7	14:25	Room 7
Yuan, Jing-Kun	SF1-103	Oral	Nov. 6	14:50	Room 0
Yuan, Wen-Jie	B6-118	Oral	Nov. 7	17:00	Room 1
Yue, Xian	E2-103	竞赛	Nov. 6	08:50	鑫顺翔
Zeng, Ling-Yong	B2-115	Oral	Nov. 6	15:10	Room 1
Zeng, Yu-Ping	E2-107	Oral	Nov. 7	14:50	Room 1
Zhang, Chen-Yang	Z0-102	Oral	Nov. 6	17:05	Room 0
Zhang, Feng-Rui	B1-126	竞赛	Nov. 6	08:10	鑫顺翔
Zhang, Guang-Zu	C2-103	Oral	Nov. 6	14:50	Room 6
Zhang, Guo-Jun	SC1-106	Oral	Nov. 6	11:20	Room 2
Zhang, Guo-Jun	SB2-006	Invited	Nov. 6	14:25	Room 5
Zhang, Hong-Jun	C1-110	Oral	Nov. 7	10:10	Room 6
Zhang, Jian	I2-104	Oral	Nov. 6	17:20	Room 8
Zhang, Jian	C5-114	Oral	Nov. 7	09:20	Room 6

Zhang, Jian-Feng	A1-002	Invited	Nov. 7	08:25	Room 8
Zhang, Jie	SC4-001	Invited	Nov. 6	14:25	Room 2
Zhang, Ji-Yun	H5-107	竞赛	Nov. 6	10:20	鑫顺翔
Zhang, Li-Wei	C1-111	Oral	Nov. 6	16:50	Room 6
Zhang, Shou-Yi	H2-102	Oral	Nov. 7	11:20	Room 7
Zhang, Shujun	SD1-002	Invited	Nov. 6	09:20	Room 3
Zhang, Song	G5-001	Invited	Nov. 7	08:25	Room 1
Zhang, Su-Wei	C3-108	Oral	Nov. 6	11:30	Room 3
Zhang, Xian	G3-105	Oral	Nov. 7	16:20	Room 3
Zhang, Xiao-Zhen	F7-001	Invited	Nov. 7	10:00	Room 3
Zhang, Yanwen	SA5-003	Invited	Nov. 7	08:55	Room 0
Zhang, Yi	C2-115	Oral	Nov. 6	11:10	Room 6
Zhang, Yi-Chi	SD1-101	Oral	Nov. 6	15:30	Room 3
Zhang, Yu	I4-103	Oral	Nov. 6	08:50	Room 8
Zhang, Yun-Sheng	SF3-001	Invited	Nov. 6	14:00	Room 0
Zhang, Zhi-Li	Z0-101	Oral	Nov. 7	11:30	Room 6
Zhao, Hang-Yuan	E3-102	竞赛	Nov. 6	09:10	鑫顺翔
Zhao, Rong-Guo	B4-101	Oral	Nov. 6	17:25	Room 0
Zhao, Tian-Ge	A1-104	Oral	Nov. 7	11:30	Room 8
Zhao, Wan-Yu	E6-105	Oral	Nov. 7	15:10	Room 1
Zhao, Yu-Ye	H6-111	Oral	Nov. 7	17:20	Room 7
Zhao, Zhe	A6-002	Invited	Nov. 7	14:00	Room 8
Zheng, Guang-Jian	SF4-101	Oral	Nov. 6	11:10	Room 0
Zheng, Li-Mei	C2-007	Invited	Nov. 6	16:25	Room 6
Zheng, Wei	F4-102	Oral	Nov. 6	14:50	Room 7
Zhi, Zhi-Fu	C5-002	Invited	Nov. 7	16:25	Room 6
Zhong, Hao	H6-103	Oral	Nov. 7	16:20	Room 7
Zhou, Ai-Guo	J1-101	Oral	Nov. 6	14:50	Room 8
Zhou, Bei-Ying	H1-103	Oral	Nov. 7	15:30	Room 6
Zhou, Xiao-Bing	SC1-103	Oral	Nov. 6	15:50	Room 2
Zhou, Xiao-Yuan	F1-003	Invited	Nov. 6	10:30	Room 7
Zhou, Yan-Chuin	SB3-003	Invited	Nov. 6	08:05	Room 5
Zhou, You	B2-003	Invited	Nov. 6	14:25	Room 1
Zhu, Qi-Shuai	SB6-101	Oral	Nov. 7	11:40	Room 5
Zliu, Zhi-Qing	C5-104	Oral	Nov. 7	11:10	Room 6
Zoli, L.	SB3-001	Invited	Nov. 6	16:25	Room 5
Zou, J	SC1-003	Invited	Nov. 6	09:20	Room 2
Zu, Yu-Fei	SB2-101	Oral	Nov. 6	17:15	Room 5

Poster Presentations

08:00 ~ 12:00, November 6

- [1] **(A1-101) Effect of synthetic technology on microstructure of Co₂O₃ powder via hydrothermal method**
Q.M. Zou, Z.H. Li, X.L. Ke, C. Yang, A.X. Chen, J.G. Song and S.B. Li (*Jiujiang University, China*)
- [2] **(A1-102) Synthesis parameters of ultrafine YAG powders via hydrothermal precipitation method**
M.H. Xu, A.X. Chen, R.H. Wang, X.Q. Wang and J.G. Song (*Jiujiang University, China*)
- [3] **(A1-103) Cryomilling and characterization of Ti/Al₂O₃ powders**
Q. Liu¹, J.Y. Wu¹, Z.H. Wang² and Z. Wang¹ (¹*University of Jinan, China*; ²*Qilu University of Technology, China*)
- [4] **(A1-105) SiC crystal derived from carbon spheres by microwave synthesis**
B.Z. Song¹, B.B. Fan¹, S.N. Wei¹, Y.J. Xie³, X.Y. Zhang² and R. Zhang^{1,2} (¹*Zhengzhou University, China*; ²*Zhengzhou University of Aeronautics, China*; ³*Funik Superhard Materials Co. Ltd., China*)
- [5] **(A1-106) Preparation of spherical silica with controllable size**
Z. Wang, M. Xu, S.L. Wang and J.Y. Ji (*Wuhan Institute of Technology, China*)
- [6] **(A1-107) One-pot synthesis of hydrophobic magnetic nanoparticles with excellent magnetic property**
X.N. Sun, S. Wang, Y.P. Wang and K.N. Sun (*Shandong University, China*)
- [7] **(A1-108) Effects of prilling process on lanthanum chromite ceramics**
X.L. Yin, Q. Zhao, D.L. He and A.M. Chang (*Xinjiang Technical Institute of Physics & Chemistry, CAS, China*)
- [8] **(A1-109) Hydrothermal fabrication of cesium tungsten bronze powders**
Y.J. Yao, Z. Chen, L.M. Zhang and Y.F. Gao (*Shanghai University, China*)
- [9] **(A1-112) Novel co-precipitation method to synthesize NiO–YSZ nanocomposite powder for solid oxide fuel cell**
X.A. Xi^{1,2}, A. Kondo², M. Naito² and H.T. Lin¹ (¹*Guangdong University of Technology, China*; ²*Osaka University, Japan*)
- [10] **(A1-114) Simple fabrication of highly dispersive β-Si₃N₄ seeds with different aspect ratio**
H. Xiong, X.A. Xi and H.T. Lin (*Guangdong University of Technology, China*)
- [11] **(A1-115) Thermal stability and properties of hexagonal OsB₂ with the doping of tungsten**
C.H. Zou, Y. Long, X. Zheng and H.T. Lin (*Guangdong University of Technology, China*)
- [12] **(A1-117) The preparation of calcium and europium co-doped γ-Ce₂S₃ red pigment**
Z.G. Ma, Y.M. Li, Y.Q. Gao, Z.M. Wang, Z.Y. Shen and Y. Hong (*Jingdezhen Ceramic Institute, China*)
- [13] **(A1-118) Preparation of AlN whiskers by combustion synthesis with rare earth oxide as additives**
W.K. Li, C. Cao, Z.H. Zhou, J.P. Ai and F.X. Luo (*Jiangxi Science and Technology Normal University, China*)
- [14] **(A1-119) Effect of nitrogen pressure on the growth behavior of AlN whiskers by combustion synthesis**
C. Cao, Z.H. Zhou, J.P. Ai and W.K. Li (*Jiangxi Science and Technology Normal University, China*)
- [15] **(A1-121) Preparation of LaF₃:Eu³⁺ nanoparticles by hydrothermal and property analysis**
C.F. Yao, L.J. Wang and W. Jiang (*Donghua University, China*)
- [16] **(A1-122) Preparation and characterization of YAG powders by solid state method**
H.L. Fang, L.J. Wang, S.J. Gu and W. Jiang (*Donghua University, China*)
- [17] **(A1-123) Preparation and coloration of zircon encapsulated ceramic black pigment with carbon sphere as colorant**
S.L. Chen^{1,2} and C.A. Wang² (¹*Jingdezhen Ceramic Institute, China*; ²*Tsinghua University, China*)

- [18] **(A1-124) Influence of sulfate ion on phase and dispersion of $Y_3Al_5O_{12}$ nanopowders with the co-crystallization method**
M.M. Hao, Z.Q. Zeng, G.F. Fan, X.H. Wang, W.Z. Lv and F. Liang (*Huazhong University of Science and Technology, China*)
- [19] **(A1-125) Fabricating uniform tetragonal barium titanate nanocrystals via sand milling assisted by an innovative two-step calcination**
Q.C. Zhao¹, X.H. Wang¹, J.Y. Kim², H.L. Gong¹, B.C. Luo¹ and L.T. Li¹ (¹*Tsinghua University, China*; ²*NanoTech Co., Ltd., China*)
- [20] **(A2-101) Fabrication and characterization of Li_4SiO_4 ceramic pebbles doped with Y_2O_3 and Nb_2O_5**
M. Wang¹, M.Q. Xiang² and Y.C. Zhang¹ (¹*University of Science and Technology Beijing, China*; ²*Institute of Process Engineering, CAS, China*)
- [21] **(A3-101) Optimized microstructures and mechanical properties of pressureless solid-state sintered SiC ceramics through grain grading**
Y.Y. Xing, H.B. Wu, X.J. Liu and Z.R. Huang (*Shanghai Institute of Ceramics, CAS, China*)
- [22] **(A5-101) The study of High Strength reticulate vitreous carbon Preparation method**
D.C. Yan (*China Building Materials Academy, China*)
- [23] **(A5-102) Preparation and properties of nanometer silicon dioxide /polyurethane composites**
L.S. Tao (*China Building Materials Academy, China*)
- [24] **(A5-105) Fabrication and properties of high temperature rigid insulation materials**
F. Zhang, S.C. Zhang, H.R. Sun, G.H. Wang, X.K. Sun, K. Fang, D.C. Yan, L.S. Tao and Y.F. Chen (*China Building Materials Academy, China*)
- [25] **(A5-106) Infiltration of W/Cu functionally graded materials in high gravity combustion synthesis**
G. He, J.X. Liu, N. Lu, G.H. Liu and J.T. Li (*Technical Institute of Physics and Chemistry, CAS, China*)
- [26] **(A6-102) Preparation of alumina slurry based on orthogonal experimental design method and artificial neural network**
L.N. Deng and Y. Zhang (*Beihang University, China*)
- [27] **(A6-103) Fabrication of dense silica ceramics through a stereolithography-based additive manufacturing**
Y.Y. Wang¹, L. Li¹, F.T. Liu², J.H. Zhao² and P.P. Zhang¹ (¹*Shandong Industrial Ceramics Research and Design Institute Co., Ltd., China*; ²*Jinan University, China*)
- [28] **(A6-104) Ferroelectric and dielectric properties of $Na_{0.5}Bi_{0.5}TiO_3$ thin films prepared by inkjet printing**
Z. Cheng¹ and Z. Zhao^{1,2} (¹*Tianjin University, China*; ²*Shanghai Institute of Technology, China*)
- [29] **(A6-105) Preparation of a neutral ceramic ink using citric acid as dispersant**
B.H. Xing¹ and Z. Zhao^{1,2} (¹*Tianjin University, China*; ²*Shanghai Institute of Technology, China*)
- [30] **(A7-101) Joining of SiC ceramics with ceramic interlayer by spark plasma sintering**
Z.Q. Wang and Z.H. Zhong (*Hefei University of Technology, China*)
- [31] **(B1-101) Graphene reinforced alumina nanocomposites via spark plasma sintering**
Y. Li (*China University of Geosciences, China*)
- [32] **(B1-102) Effect of raw material formulation on the properties of Al_2O_3 -Al cermet materials**
R.H. Wang¹, A.X. Chen¹, L.T. Liu¹, C.F. Yu¹, S. Zhao¹, Q. Huang¹, J.G. SONG¹ and C.W. HAO² (¹*Jiujiang University, China*; ²*West Anhui University, China*)
- [33] **(B1-103) Impact strength and damage evaluation of insulation materials**
Z. Gong, A.R. Guo and J.C. Liu (*Tianjin University, China*)
- [34] **(B1-104) A heat-resistant epoxy-modified preceramic polymer with broad working temperature range for silicon carbide and mullite joining**
B. Tang, M.C. Wang, R.M. Liu, J.C. Liu, H.Y. Du and A.R. Guo (*Tianjin University, China*)
- [35] **(B1-108) The study of heating mode of an expansion insulation material**
K. Fang, Y.F. Chen, S.C. Zhang, H.R. Sun, X.K. Sun, L.S. Tao and D.C. Yan (*China Building Materials Academy, China*)

- [36] **(B1-109) Influence of nano- Al_2O_3 particle addition and ultrasonic dispersing on thermal shock resistance of ZTA/corderite composites**
H.T. Chen¹, H.X. Lu¹, L. Zhang¹ and R. Zhang^{1,2} (¹Zhengzhou University, China; ²Zhengzhou Institute of Aeronautical Industry Management, China)
- [37] **(B1-110) Thermal properties of carbon fiber reinforced alumina composites derived from sol-gel**
X.Y. Gu, Q.S. Ma, C.Y. Fan and K.H. Zeng (National University of Defense Technology, China)
- [38] **(B1-111) Deposition of aluminum phosphate coating on mullite fibers**
C. Chen¹, B. Feng¹, S.J. Hu¹, Y. Zhang¹, S. Li² and L.F. Gao² (¹Beihang University, China; ²Beijing Composite Materials Co., Ltd., China)
- [39] **(B1-112) Fabrication and mechanical, thermal properties of carbon fiber reinforced fused silica composites**
X.X. Hao, J.Q. Bi, W.L. Wang and G.X. Sun (Shandong University, China)
- [40] **(B1-113) A comparison of the effect of dispersion method on the mechanical properties of graphene reinforced alumina composites**
L. wang, J.Q. Bi and W.L. Wang (Shandong University, China)
- [41] **(B1-114) Preparation and mechanical properties of boron nitride nanosheets/alumina composites**
W.L. Wang, G.X. Sun, X.N. Sun and J.Q. Bi (Shandong University, China)
- [42] **(B1-116) Research on the performance of a carbon fiber reinforced inorganic polymer composite**
X.M. Zhang, S. Li, L.F. Gao, K. Yu and Y.D. Xiao (Beijing Composites Materials Co., Ltd., China)
- [43] **(B1-118) Study of electro-conductive composite of ZTA ceramics for spark machining**
C.Y. Chen and Y.F. Zhou (Fujian Institute of Research on the Structure of Matter, CAS, China)
- [44] **(B1-120) Effect of LiF addition on the sintering and mechanical properties of MgAl_2O_4 ceramic**
J.B.Liu, Z.F. Wang, X.T. Wang, H. Liu and Y. Ma (Wuhan University of Science and Technology, China)
- [45] **(B1-121) The in-situ preparation of $\text{MgAl}_2\text{O}_4/\text{YAG}$ eutectic composites by reaction sintering using induction heating**
H. Xu, X.T. Wang, Z.F. Wang, Y. Ma and H. Liu (Wuhan University of Science and Technology, China)
- [46] **(B1-122) Effect of ammonia on CeO_2 microspheres prepared by internal gelation process**
X.Q. Ding, J.T. Ma, X.Y. Zhao, S.C. Hao, C.S. Deng and G.X. Li (Tsinghua University, China)
- [47] **(B1-123) Influence of the aspect ratio of Al_2O_3 whiskers on the densification, microstructure evolution and martensitic transformation of 12Ce-TZP composites**
F. Meng, F. Zuo and H.T. Lin (Guangdong University of Technology, China)
- [48] **(B1-124) Preparation and properties of rare earth oxides codoped zirconia for thermal barrier coatings**
Z.Z. Yi¹, F.R. Zhai¹, K. Shan¹, N. LI¹ and Z.P. Xie^{2e} (¹Honghe University, China; ²Tsinghua University, China)
- [49] **(B1-127) Preparation and microstructure of $\text{Al}_2\text{O}_3/\text{ZrO}_2/\text{Er}_3\text{Al}_5\text{O}_{12}$ eutectic ceramics**
Z.G. Liu, S.F. Yuan, J.H. Ouyang and Y.J. Wang (Harbin Institute of Technology, China)
- [50] **(B1-131) Mechanism and technics to produce geographical indication products of Chinese blue-and-white porcelain**
G.Q. Shao¹, X.B. Zhong², J.W. Mao¹, C. Zhu¹, X.Y. Feng², G.Z. Xie¹, H.B. Li¹, Z.B. Qiu² and Y.Y. Zhong² (¹Wuhan University of Technology, China; ²Jade Ceram. Co. Ltd., China)
- [51] **(B1-135) High density and uniform microstructure of alumina ceramics via low pressure filtering with copolymers as dispersant and gelling agent**
Z.X. Di, S. Shimai, J. Zhao and S.W. Wang (Shanghai Institute of Ceramics, CAS, China)
- [52] **(B1-136) Phase and microstructure characteristics of $\text{Nd}_2\text{O}_3\text{-Y}_2\text{O}_3$ co-doped zirconia ceramics**
W. Chen, D.L. Hu, J.J. Xing, Y. Jiang and H. Gu (Shanghai University, China)
- [53] **(B1-138) Tructural characterization of $(\text{BiFeO}_3)_x\text{-(PbTiO}_3)_{1-x}$ based solid solution by scanning electron microscopy**
X.W. Jiang, Y. Jiang and H. Gu (Shanghai University, China)

- [54] **(B1-139) Effect of sintering temperature on property of ceramic proppants adding coal gangue**
Y.F. Gao¹, J.Y. Hao¹, Y.M. Tian², K.Y. Wang¹, H.Q. Ma¹, Y. Zhou¹, Y.Q. Wu¹, G.M. Li¹, L.P. Liang¹ and P.B. Bai³ (¹Taiyuan University of Science and Technology, China; ²Shanxi Engineering Vocational College, China; ³Changqing Fracturing Proppant Co. Ltd, China)
- [55] **(B1-140) Effect of manganese dioxide on the crystalline growth and properties of corundum**
Y.F. Zhai¹, Y.Q. Wu¹, Y.S. Chai¹, Y.M. Tian², K.Y. Wang¹, G.M. Li¹, Y. Zhou¹, J.Y. Hao¹ and H.Q. Ma¹ (¹Taiyuan University of Science and Technology, China; ²Shanxi Engineering Vocational College, China)
- [56] **(B1-141) Fabrication of MgO/graphene ceramic composites by combining combustion synthesis with spark plasma sintering**
N. Lu, G. He, J.X. Liu and J.T. Li (*Technical Institute of Physics and Chemistry, CAS, China*)
- [57] **(B1-143) The synthesis and characterization of the series of LaTi₂Al₉O₁₉ thermal barrier materials**
P. Zhang^{1,2}, K.L. Choy¹ (¹University College London, UK; ²Tsinghua University, China)
- [58] **(B1-144) Preparation and properties of phase change thermal insulation materials**
S.C. Zhang (*China Building Materials Academy, China*)
- [59] **(B2-105) Polymer-derived nano-sized SiC-containing ZrB₂ composites: densification, microstructure and flexural strengths**
S.Q. Guo (*National Institute for Materials Science, Japan*)
- [60] **(B2-106) Isothermal oxidation resistance of Zr₃[Al(Si)]₄C₆-based composite ceramics at 1000-1300°C in air**
L. Yu¹, Q. Tian¹, Y.R. Shen¹, Z.F. Wang¹, X.H. Wang¹, J. Yang², Y.B. Feng² and T. Qiu² (¹Changshu Institute of Technology, China; ²Nanjing Tech University, China)
- [61] **(B2-107) The preparation of the SrZr_{4-x}Ti_x(PO₄)₆ ceramics and study on its thermal expansion**
Y. Wang, L.O. Yang, Y.Y. Zhou and F.T. Liu (*University of Jinan, China*)
- [62] **(B2-108) Study on the preparation of C_f/SiC-ZrB₂ composite material by adding SiC and ZrB₂ powders in organic precursors**
L.P. Yang¹, Y. Wang¹, K. Jiang², F.H. Yang², C.L. Zhou², Y.Y. Wang² and F.T. Liu¹ (¹University of Jinan, China; ²Shandong Industrial Ceramics Research and Design institute Co., Ltd, China)
- [63] **(B2-109) Research of quartz fibers reinforced SiNB ceramic matrix composites prepared by PIP**
L.F. Gao¹, S. Li¹, K. Yu¹, S.Q. Wang², X.M. Zhang¹, Y.Y. Xiao¹ and K.X. Dong¹ (¹Beijing Composites Materials Co., Ltd., China; ²National University of Defense Technology, China)
- [64] **(B2-110) Preparation and properties of C_f/mullite composites by PIP**
Y.Y. Wang, C.L. Zhou, K. Jiang and F.H. Yang (*Shandong Research & Design Institute of Industrial Ceramics Co., Ltd, China*)
- [65] **(B2-111) Preparation and performance of C/C-SiC ceramic matrix composites**
F.H. Yang¹, Y.Y. Wang¹, L.P. Yang², C.L. Zhou¹, R.X. Liu¹ and K. Jiang¹ (¹Shandong Industrial Ceramics Research & Design Institute Co., Ltd, China; ²University of Jinan, China)

Poster Presentations

14:00 ~ 18:00, November 6

- [1] **(B2-112) Preparation and properties of NZP family ceramics**
H. Li¹, H.Z. Xu¹, Y.Y. Wang¹, C.L. Zhou¹, R.X. Liu¹ and L.P. Yang² (¹Shandong Industrial Ceramic Research and Design Academy, China; ²University of Jinan, China)
- [2] **(B2-113) Preparation of YAM coating on the ZrB₂ composites and their ablation resistance**
S.B. Li, J.G. Song, H.Y. Ru and X.B. Bai (*Jiujiang University, China*)
- [3] **(B2-114) Effect of amorphous SiBCN on the strength of silicon carbide porous ceramics**
G.Q. Song, S.J. Hu, B. Feng and Y. Zhang (*Beihang University, China*)
- [4] **(B2-116) Effect of particle characteristics on dispersion of Si₃N₄ powders and tensile strength of green tapes**
W.J. Li, S.D. Ye, R.X. Huang and H.T. Lin (*Guangdong University of Technology, China*)
- [5] **(B2-120) Spark plasma sintering and characterization of mixed h-BN powders with different grain sizes**
F.R. Zhai¹, K. Shan¹, Z.Z. Yi¹, M. Lu¹ and Z.P. Xie² (¹Honghe University, China; ²Tsinghua University, China)
- [6] **(B2-121) Synthesis, characterization, and ceramization of ZrC/SiC composite by a precursor conversion route**
W.T. Xu and Y.F. Zhou (*Fujian Institute of Research on the Structure of Matter, CAS, China*)
- [7] **(B2-122) Effect of infiltration temperature on microstructure and mechanical properties of SiC/TiB₂ composites**
Y. Zhang, C.P. Zhang, Y.F. Chen and M.Y. Chen (*Northeastern University, Shenyang, China*)
- [8] **(B2-126) Preparation of aluminum nitride powder for aqueous slip casting**
T. Wang¹, Y. Wang¹, S.H. Dai¹, M.M. Ding¹, D. Zhou², J.J. Xie¹ and Y. Shi¹ (¹Shanghai University, China; ²Shanghai Institute of Technology, China)
- [9] **(B2-128) Fabrication and mechanical properties of SiC/ZrC composites by in-situ reactive hot pressing**
K. Wang^{1,2}, Y.F. Zhou², W.T. Xu², D.C. Chen¹ and M. Zhang¹ (¹Foshan University, China; ²Fujian Institute of Research on the Structure of Matter, CAS, China)
- [10] **(B2-131) Characterization of fiber-like SiCN formed during the nitridation of silicon**
L. Qu, W.J. Yuan, J. Li, C.J. Deng and H.X. Zhu (*Wuhan University of Science and Technology, China*)
- [11] **(B2-138) Study on microstructure and solid-solution of TiB₂-TiC composites**
T.Y. Hu¹, D.L. Hu¹, M.Y. Yao², J.J. Xing¹, Y. Jiang¹, Y.J. Wang² and H. Gu¹ (¹Shanghai University, China; ²Harbin Institute of Technology, China)
- [12] **(B2-139) Study on the microstructure and the machining performance of Ti₃SiC₂-TiB₂-TiC composite ceramic**
X.J. Tang, J.S. Li and F. Zhao (*Army Engineering University, China*)
- [13] **(B2-140) Wet oxidation behavior of near-stoichiometric SiC fibers (KD-S) in simulated aeroengine circumstance**
L. Li Liang^{1,2}, K. Jian² and Y.F. Wang² (¹Northwest Institute of Nuclear Technology, China; ²National University of Defense Technology, China)
- [14] **(B2-141) Effect of mesocarbon microbeads (MCMBs) on the microstructure and properties of pressureless sintering MCMBs-SiC composites**
X.J. Wang¹, X.M. Yao¹, Z.R. Huang² and X.J. Liu (¹Shanghai Institute of Ceramics, CAS, China; ²Ningbo Institute of Industrial Technology, CAS, China)

- [15] **(B2-142) Influence of the content of $Zr_2Al_4C_5$ on properties of ZrB_2 - $Zr_2Al_4C_5$ composite ceramics fabricated by spark plasma sintering**
Q.L. Guo¹, J.L. Pang¹, J.Z. Gan¹, J.G. Li² and L.M. Zhang² (¹Northwest Minzu University, China; ²Wuhan University of Technology, China)
- [16] **(B3-101) Anisotropic crystal structure, compressibility and bond stiffness of ternary layered borides MAB phases Cr_2AlB_2 , Cr_3AlB_4 , and Cr_4AlB_6 : an ab initio study**
X.X. Qi, Y.L. Bai, N. Li, F.Y. Kong, X.D. He and R.G. Wang (Harbin Institute of Technology, China)
- [17] **(B3-105) Preparation, microstructure and mechanical properties of Nb_4AlC_3 by in situ reactive hot pressing**
P. Cai¹, L.J. Wang¹, X.J. Liu¹, Y. Liu¹, Y.H. Huang¹ and Z.R. Huang² (¹Shanghai Institute of Ceramics, CAS, China; ²Ningbo Institute of Industrial Technology, CAS, China)
- [18] **(B5-102) Effect of Ni addition on the microstructures and mechanical properties of Ti(C,N)-based cermets**
P. Wu, S.C. Liu and X.R. Jiang (Longyan University, China)
- [19] **(B6-101) Magnesia-spinel-perovskite composite**
J. Szczerba and Edyta Śnieżek (AGH University of Science and Technology, Poland)
- [20] **(B6-103) The properties of mullite based castable composites with different addition of silicon**
S. Ouyang, Y.B. Li, S.J. Li, R.F. Xiang, Q.H. Wang and N.N. Xu (Wuhan University of Science and Technology, China)
- [21] **(B6-104) Preparation of light-weight insulation mullite materials with flint clay**
J.B. Liu, Y.B. Li, S.J. Li, R.F. Xiang, N.N. Xu, Q.H. Wang and S. Ouyang (Wuhan University of Science and Technology, China)
- [22] **(B6-105) Effect of different phase of alumina on the properties of lightweight insulation materials**
H. Luo, Y.B. Li, S.J. Li, R.Y. Chen, R.F. Xiang, N.N. Xu, Q.H. Wang and S. Ouyang (Wuhan University of Science and Technology, China)
- [23] **(B6-107) Effect of nanometer $MgCO_3$ addition on the sintering property of magnesite clinker**
W.N. Zhang, N. Deng, Y.Y. Ju and W.J. Liang (Jiujiang University, China)
- [24] **(B6-108) Research on mechanism of corrosion resistance of $MgAl_2O_4$ spinel with different Al_2O_3 contents to gasifier slag**
H.G. Sun^{1,2}, H.X. Li^{1,2} and W.B. Jiao² (¹University of Science and Technology Beijing, China; ²Sinosteel Luoyang Institute of Refractories Research Co., Ltd., China)
- [25] **(B6-109) Preparation of Al_2O_3 -SiC composite powder by carbothermal reduction of coal gangue and influence on properties of blast furnace stemming**
Q. Wang, L.N. Zhang, X. Min, M.H. Fang, X.W. Wu, Y.G. Liu and Z.H. Huang (China University of Geosciences (Beijing), China)
- [26] **(B6-110) Effects of Al/Si molar ratio on the properties of mullite-corundum refractory material**
W.X. Dong, X.Y. Gu, Z.W. Liao, S.R. Liu, X.H. Li and B.X. Qiu (Jingdezhen Ceramic Institute, China)
- [27] **(B6-111) Effect of micro-sized alumina powder addition on the hydration of calcium aluminate cement**
Z.F. Xia, Z.F. Wang, X.T. Wang, H. Liu and Y. Ma (Wuhan University of Science and Technology, China)
- [28] **(B6-112) Effects of MnO addition on properties of alumina-magnesia refractory castables**
H. Tang, W.J. Yuan, C.J. Deng and H.X. Zhu (Wuhan University of Science and Technology, China)
- [29] **(B6-114) Effect of glazed refractory on chemical composition and inclusions in Cr containing steel**
Y.S. Zou, A. Huang, H.Z. Gu, L.P. Fu, P.F. Lian and Y.J. Wang (Wuhan University of Science and Technology, China)
- [30] **(B6-116) Effect of WO_3 introduction on the performances of cordierite ceramics prepared by using kyanite as raw materials**
M.L. Qin, X.T. Wang, Z.F. Wang, Y. Ma and H. Liu (Wuhan University of Science and Technology, China)
- [31] **(B6-119) Potash erosion resistance of chromium-containing materials**
Q. Luo, H.Z. Gu, A. Huang and M.J. Zhang (Wuhan University of Science and Technology, China)

- [32] **(B7-102) Influence of diamond particle size on the thermal and mechanical properties of glass-diamond composites**
D.D. Feng, Z.H. Li, Y.M. Zhu and H.L. Ji (*Tianjin University, China*)
- [33] **(B7-104) Crystallization and mechanical properties of $\text{Al}_2\text{O}_3\text{-La}_2\text{O}_3\text{-ZrO}_2$ eutectic nanoceramics**
G. He, J.X. Liu, N. Lu, G.H. Liu and J.T. Li (*Technical Institute of Physics and Chemistry, CAS, China*)
- [34] **(B7-105) Effects of holding time on the properties of proppant synthesized by adding waste ceramic sands**
B.S. Zhu¹, Y.M. Tian², G.M. Li¹, K.Y. Wang¹, L.P. Liang¹, Y. Zhou¹, Y.Q. Wu¹, J.Y. Hao¹, H.Q. Ma¹ and P.B. Bai³ (¹*Taiyuan University of Science and Technology, China*; ²*Shanxi Engineering Vocational College, China*; ³*Changqing Fracturing Proppant Co. Ltd, China*)
- [35] **(B7-106) Thermal treatment of bauxite: the calcining mechanism of ceramsite proppant**
Y.F. Zhang¹, K.Y. Wang¹, Y.M. Tian², Y.Q. Wu¹, G.M. Li¹, Y.S. Chai¹, Y. Zhou¹, J.Y. Hao¹, H.Q. Ma¹ and P.B. Bai³ (¹*Taiyuan University of Science and Technology, China*; ²*Shanxi Engineering Vocational College, China*; ³*Changqing Fracturing Proppant Co. Ltd, China*)
- [36] **(B8-101) Processing and properties of fine cubic boron nitride particles crushed by high energy ball**
L.X. Liang¹, H.L. Wang¹, G. Shao¹ and R. Zhang² (¹*Zhengzhou University, China*; ²*Zhengzhou University of Aeronautics, China*)
- [37] **(B8-102) Preparation and properties of diamond / Cu composites sintered by spark plasma sintering**
J.M. Yan, H.L. Wang and G. Shao (*Zhengzhou University, China*)
- [38] **(B8-103) Synthesis of tungsten borides by mechanical alloying**
X. Zheng, Y. Long, C.H. Zou and H.T. Lin (*Guangdong University of Technology, China*)
- [39] **(C1-101) Magnetoelectric properties of the $\text{PbZr}_{0.52}\text{Ti}_{0.48}\text{O}_3/\text{CoFe}_2\text{O}_4$ composites**
W. Wang, J.X. Zhang, H. Ke, D.C. Jia and Y. Zhou (*Harbin Institute of Technology, China*)
- [40] **(C1-102) Rietveld refinement and physical properties of $\text{Bi}_{0.8}\text{Gd}_{0.2}\text{Fe}_{0.95}\text{Ti}_{0.05}\text{O}_3$ multiferroics**
F. Xue, W. Li, L. Tang, Z. Luo and Z.N. Xin (*Jiangxi University of Technology, China*)
- [41] **(C1-104) Structural, dielectric, and multiferroic properties of Gd and Ti co-doped BiFeO_3 nanoceramics prepared by spark plasma sintering**
Y.H. Tian¹, Q.Y. Fu¹ and F. Xue² (¹*Huazhong University of Science and Technology, China*; ³*Jiangxi University of Technology, China*)
- [42] **(C1-105) Effect of rare earth doping on electrochemical properties of lithium zinc ferrite for supercapacitor**
W.K. Yan, J.Q. Bi and W.L. Wang (*Shandong University, China*)
- [43] **(C1-107) Effects of A-site ion radii to the asymmetry of $\text{La}_{0.7}\text{A}_{0.3}\text{MnO}_3\text{-BaTiO}_3$ (A=Ba, Sr, Ca) solid solutions and their intrinsic magnetodielectric effects**
L. Zhou, C. Chen, D.X. Zhou and Q.Y. Fu (*Huazhong University of Science and Technology, China*)
- [44] **(C1-108) Bi^{3+} doped $\text{La}_{0.5}\text{Ba}_{0.5}\text{FeO}_3$ perovskite oxide: effect of A-site lattice distortion on $\text{Fe}^{5+}/\text{Fe}^{3+}$ charge order behavior**
H.F. Wang, D. Wang, C.M. Huang and Y.J. Bai (*Inner Mongolia University of Technology, China*)
- [45] **(C1-113) Effect of annealing temperature on the ferroelectric properties of sol-gel derived BiFeO_3 thin films prepared by inkjet printing**
J. Li¹ and Z. Zhao^{1,2} (¹*Tianjin University, China*; ²*Shanghai Institute of Technology, China*)
- [46] **(C1-114) Synthesis and characterization of Mn and Y doped barium titanate**
M.J. Wang, H. Huang, Y.X. Wang, L. Zhang and H.Y. Yu (*Southern University of Science and Technology, China*)
- [47] **(C2-101) Barium titanate-ceramics microstructure analysis and Minkowski fractal constructions**
V.V. Mitic^{1,2*}, Lj. Kocic¹ and V. Paunovic¹ (¹*University of Nis, Serbia*; ²*Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia*)
- [48] **(C2-102) Energy fractal nature and electronic ceramics materials science**
V.V. Mitic^{1,2*}, V. Paunovic¹ and Lj. Kocic¹ (¹*University of Nis, Serbia*; ²*Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia*)

- [49] **(C2-104) Effect of Ba/Al ratio on structure, dielectric and ferroelectric properties of $\text{Ba}_{1+x}\text{Al}_2\text{O}_{4+x}$ ceramics**
J. Li, W.Z. Lu, X.K. Lan, X.Q. Song and W. Lei (*Huazhong University of Science and Technology, China*)
- [50] **(C2-106) The properties of PLZT(4/52/48) ceramics sintered by SPS**
Y.W. Guo, W. Wang, Y. Zhou, L. Song, H. Ke and Y. Zhou (*Harbin Institute of Technology, China*)
- [51] **(C2-107) BaTiO_3 /Teflon nanocomposite ferroelectric thin films for low voltage electrowetting systems**
W.Q. Wang, J.Q. Niu and Y. Su (*Nanjing University of Science and Technology, China*)
- [52] **(C2-108) Polarity effect and dielectric breakdown of composite ferroelectric films as the dielectric for electrowetting systems**
W.Q. Wang and Y. Su (*Nanjing University of Science and Technology, China*)
- [53] **(C2-109) Phase structure and the microstructure of BiFeO_3 superfine particles synthesized by hydrothermal method**
H.P. Song and Y.Y. Wang (*Guizhou University, China*)
- [54] **(C2-110) Effect of HfO_2 additive on the electrical breakdown strength and energy storage properties of $(\text{Ba}_{0.6}\text{Sr}_{0.4})_{0.85}\text{Bi}_{0.1}\text{TiO}_3$ ceramics**
H.B. Wang, J. Tao, M.L. Mu, X.H. Wang and W.Z. Lu (*Huazhong University of Science and Technology, China*)
- [55] **(C2-118) Structural and piezoelectric properties lead-free $(\text{Bi,Na})\text{TiO}_3$ -based ceramics**
W. Feng, X.H. Wang and L.T. Li (*Tsinghua University, China*)
- [56] **(C2-119) Enhanced and stable strain memory in Mn-doped $\text{Pb}(\text{Mn}_{1/3}\text{Sb}_{2/3})\text{O}_3$ - $\text{Pb}(\text{Zr,Ti})\text{O}_3$ ceramics realized by sesquipolar loading**
C.Y. Chen, Z.Y. Zhou, Z. Liu, R.H. Liang and X.L. Dong (*Shanghai Institute of Ceramics, CAS, China*)
- [57] **(C2-122) Study of ferroelectric domain dynamics via piezoresponse force microscopy**
K.Y. Zhao, H.R. Zeng, J.T. Zeng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- [58] **(C2-123) Effect of sintering process on microstructures and dielectric properties of Nb-doped BaTiO_3 - $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3$ ceramics for MLCC applications**
L.L. Chen, X.H. Wang, Z.B. Shen and L.T. Li (*Tsinghua University, China*)
- [59] **(C3-102) Effect of MnO_2 addition on the structure and electric properties of $(\text{Ba}_{0.94}\text{Ca}_{0.06})(\text{Sn}_{0.09}\text{Ti}_{0.91})\text{O}_3$ ceramics**
H.Z. Song, Y.L. Wu, R.X. Huang and H.T. Lin (*Guangdong University of Technology, China*)
- [60] **(C3-103) Effect of Si_3N_4 dopant on piezoelectric and dielectric properties of BaTiO_3 ceramic**
J. Wu, R.X. Huang and H.T. Lin (*Guangdong University of Technology, China*)
- [61] **(C3-104) Effect of powder embedded sintering on microstructure of LiTaO_3 ceramics**
Y. Wang¹, Y.F. Zhang¹, P.X. Qiao¹, H.J. Kong¹ and X.F. Chen² (¹*Shanghai University of Engineering Science, China*; ²*Shanghai Institute of Ceramics, CAS, China*)
- [62] **(C3-106) High piezoelectric properties of KNN-based lead-free ceramics sintered in reducing atmosphere**
Z.Y. Cen, X.H. Wang, W. Feng and L.T. Li (*Tsinghua University, China*)
- [63] **(C3-107) Synthesis and piezoelectric properties of textured BiFeGa-BaTiO_3 piezoelectric ceramics**
J.G.L. Peng, G.R. Li, J.T. Zeng and L.Y. Zheng (*Shanghai Institute of Ceramics, CAS, China*)
- [64] **(C3-109) Synthesis and electrical properties of MnO_2 -doped PYN-PZT ceramics**
X. Luo, J.T. Zeng, L.Y. Zheng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- [65] **(C5-101) Structural evolution and microwave dielectric properties of $\text{Ba}(\text{Co}_{1/3}(\text{Nb}_{1-x}\text{W}_{5x/6})_{2/3})\text{O}_3$ ceramics**
Z.F. Wang, J. Zhou, Y. Sun, L. Yu, S.L. Yin, X.H. Wang (*Changshu Institute of Technology, China*)

Poster Presentations

08:00 ~ 12:00, November 7

- [1] **(C5-102) Sintering characteristic and microwave dielectric properties of low-permittivity Zn(Zn_{0.5}Si_{0.5})_xAl_{2-x}O₄ ceramics with spinel-structure**
X.K. Lan, W.Z. Lu, J. Li, X.Q. Song and W. Lei (*Huazhong University of Science and Technology, China*)
- [2] **(C5-103) Low temperature fired BaAl₂Si₂O₈-Ba₅Si₈O₂₁ based microwave dielectric ceramics**
X.Q. Song, W.Z. Lu, J. Li, X.K. Lan and W. Lei (*Huazhong University of Science and Technology, China*)
- [3] **(C5-106) Sintering atmosphere behavior and microwave dielectric properties of A-site-doped Ca_(1-1.5x)Ce_xTiO₃ ceramics**
M.L. Mu, J. Tao, H.B. Wang, X.H. Wang and W.Z. Lu (*Huazhong University of Science and Technology, China*)
- [4] **(C5-107) TiO₂-(Zn_{1/3}Nb_{2/3})O₂-ZrO₂ microwave dielectric ceramics with near-zero temperature coefficient of resonant frequency**
L. Zhang, Q.Y. Fu, Y.X. Hu, H. Shi, Z.P. Zheng, W. Luo and G. Wang (*Huazhong University of Science and Technology, China*)
- [5] **(C5-109) Structure and microwave dielectric properties of Ca_{0.6}(Sm_{1-x}Bi_x)_{0.2667}TiO₃ ceramics**
G. Wang, Q.Y. Fu, Y.X. Hu, L. Zhang and H. Shi (*Huazhong University of Science and Technology, China*)
- [6] **(C5-110) Effect of Zr⁴⁺ substitution on microwave dielectric properties of ZnTiNb₂O₈ ceramics**
Y.J. Huang, Y.M. Li, Z.X. Xie, Z.Y. Shen and F.S. Song (*Jingdezhen Ceramic Institute, China*)
- [7] **(C5-111) (1 - x)ZrTiO₄-xMgSb₂O₆ microwave dielectric ceramics with near-zero temperature coefficient**
H. Shi, Q.Y. Fu, Y.X. Hu, L. Zhang, Z.P. Zhang, W. Luo and G. Wang (*Huazhong University of Science and Technology, China*)
- [8] **(C5-116) Microstructural analysis of Bi-doped (Sr,Ba)TiO₃ ceramics by SEM**
S.Y. Zhu, J.J. Xing, D.L. Hu, Y. Jiang and H. Gu (*Shanghai University, China*)
- [9] **(C5-118) Microstructure and microwave dielectric behavior of a-site-substituted Zr_{0.8-x}A_xSn_{0.2}TiO₄ ceramics**
X. Wang, W.Z. Lu and W. Lei (*Huazhong University of Science and Technology, China*)
- [10] **(C5-119) Preparation, performances and reaction mechanism of NiZrNb₂O₈ microwave dielectric ceramics**
M.J. Wu, J.D. Chen, Y. Zhang and Y.C. Zhang (*University of Science and Technology Beijing, China*)
- [11] **(C6-103) Microstructure and electrical properties of Mn_{1.56+x}Co_{0.96}Ni_{0.48}O₄**
X.H. Zou, Q.Y. Fu and H. Zu (*Huazhong University of Science and Technology, China*)
- [12] **(C6-105) Regulation and controlling of the nonlinear coefficient of ZnO varistor ceramics**
L.Y. Zheng, Z.C. Cao, X. Shi, X.Z. Ruan, J.T. Zeng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- [13] **(E1-101) Effect of fibers orientation on the mechanical behavior of mullite fibrous Network with a 3D skeleton structure**
X.X. Hu, L.Y. Li, D.N. Xie and H.Y. Du (*Tianjin University, China*)
- [14] **(E1-102) Study on the conversion and the mechanical properties of the alumina bubble ceramics prepared with silicone rubber precursor**
R.M. Liu, B. Tang, A.R. Guo and J.C. Liu (*Tianjin University, China*)
- [15] **(E1-103) Preparation of highly porous SiOC ceramics from hydrogen-containing polysiloxane with water vapor assisted pyrolysis**
J.K. Li, X. Liu, Y.X. Wang and P.C. Guo (*Jingdezhen Ceramic Institute, China*)

- [16] **(E1-105) Effect of halloysite on anti contraction performance of HNTs/Si₃N₄ hybrid aerogels prepared by supercritical drying combined PDCs route**
H.L. Liu, X. He and H.Y. Li (*Tianjin Chengjian University, China*)
- [17] **(E1-108) Preparation of lightweight mullite-anorthite refractory by different routes**
D.Y. Zhang, W.J. Yuan, L. Qu, J. Li, C.J. Deng and H.X. Zhu (*Wuhan University of Science and Technology, China*)
- [18] **(E2-105) Al₂O₃ aerogel prepared by an ion exchanged sol-gel method with high temperature stability**
Y.C. Ji, J. He, H.J. Yu, H.M. Ji and X.L. Li (*Tianjin University, China*)
- [19] **(E2-106) Preparation of low dielectric constant porous silicon nitride ceramics for radome application**
L. Li^{1,2}, B.X. Zhu¹, H.S. Wang¹ and J. Zhang² (¹*Shandong Industrial Ceramics Research and Design Institute Co., Ltd., China*; ²*Harbin Institute of Technology, China*)
- [20] **(E2-108) Investigation on the preparation and properties of porous alumina-mullite membrane supports**
J. Ma, A.Z. Shui, W.W. Chen, J.Q. Li and K.H. Hua (*South China University of Technology, China*)
- [21] **(E2-109) Highly porous barium strontium titanate ceramic foams from particle-stabilized foams with tunable dielectric properties**
J. Xu, K.N. Zhang, M.J. Qin and F. Gao (*Northwestern Polytechnical University, China*)
- [22] **(E3-103) Synthesis and application of mesoporous aluminas**
F. Zeng, L.J. Wang and W. Jiang (*Donghua University, China*)
- [23] **(E4-103) Pore structure control of microporous TiO₂ membranes**
S.F. Shi, J.H. Gu, Y.Q. Zeng and Q.Q. Du (*Beihang University, China*)
- [24] **(E6-102) Bio-inspired brick for smart indoor humidity control**
X.P. Liu and Y.F. Gao (*Shanghai University, China*)
- [25] **(E6-104) Effects of critical particle size and aggregate gradation on the properties of corundum porous materials**
X. Xiong, Z.F. Wang, X.T. Wang, H. Liu and Y. Ma (*Wuhan University of Science and Technology, China*)
- [26] **(E6-106) Vanadium nitride nanofibers for assembling symmetric all-solid-state supercapacitors**
D.D. Zhang, H.P. Li, S.Y. Hu, J. Li, Z. Su and Y.W. Yan (*Huazhong University of Science and Technology, China*)
- [27] **(F1-104) Enhancement of thermoelectric properties of Yb_{0.35}Co₄Sb₁₂ n-type skutterudites by silver addition**
P. Chen, Z.X. Zhou, L.J. Wang and W. Jiang (*Donghua University, China*)
- [28] **(F1-105) Preparation and Investigation on thermoelectric properties of Na-doped polycrystalline SnSe**
F. Chu, Z.X. Zhou, L.J. Wang and W. Jiang (*Donghua University, China*)
- [29] **(F1-106) An efficient thermoelectric material :Preparation of bulk PANI/AgNWs composites by SPS**
C.X. Guo, Z.X. Zhou, L.J. Wang and W. Jiang (*Donghua University, China*)
- [30] **(F1-107) Improved thermoelectric performance of n-type PbTe via Se-doped and hydrothermal synthesis**
K.M. Zhang¹, Q.H. Zhang^{1,2}, L.J. Wang¹ and W. Jiang^{1,3} (¹*Donghua University, China*; ²*Shanghai Institute of Ceramics, CAS, China*; ³*Jingdezhen Ceramic Institute, China*)
- [31] **(F1-108) n-type nanostructured thermoelectric materials prepared from chemically synthesized Bi₂Te₃ nanoplates**
J.Z. Zou, L.J. Wang and W. Jiang (*Donghua University, China*)
- [32] **(F1-109) High thermoelectric performance achieved by optimizing heterogeneous phase in MgAgSb-based materials**
Y.Y. Zheng, C.Y. Liu, L. Miao, J.L. Chen, J. Gao, X.Y. Wang, X. Li, Z.H. Lv and F.Y. Li (*Guilin University of Electronic Technology, China*)

- [33] **(F1-110) Enhanced thermoelectric properties of $\text{In}_2\text{O}_3(\text{ZnO})_5$ natural superlattice ceramics by optimizing sintering process**
L.J. Cui, Z.H. Ge, P. Qin and J. Feng (*Kunming University of Science and Technology, China*)
- [34] **(F1-111) Condensate reflux and spark plasma sintering-assisted synthesis of layered-structure $\alpha\text{-In}_2\text{Se}_3$ for thermoelectrics**
S.H. Wu, C.Y. Liu, L. Miao, J. Gao, X.Y. Wang, J.H. Zhou, Z.S. Wu and C.J. Shen (*Guilin University of Electronic Technology, China*)
- [35] **(F3-101) Influence of the mole ratio of salt to alkali on the surface structure of SnO_2 thin film**
C. Yang, X.Q. Wang, F. Wang, R.X. Deng, D.J. Chang, L.T. Liu, F.M. Hu, J.G. Song and S.B. Li (*Jiujiang University, China*)
- [36] **(F3-102) Preparation of $\text{Cu}_2\text{ZnSnS}_4$ thin films for solar cell application by sol-gel method**
J.Y. Zhang, X.D. Li, J.N. Song and Y. Dong (*Northeastern University, China*)
- [37] **(F4-101) Two-dimensional MXene/rGO composites as anode materials for Lithium-ion battery**
C.J. Shen, L.B. Wang, A.G. Zhou and Q.K. Hu (*Henan Polytechnic University, China*)
- [38] **(F4-103) Preparation and properties of Ti_2CT_x /ultrahigh molecular weight polyethylene composites**
X.L. Wang, L.B. Wang, H. Zhang, C.J. Shen, F.F. Liu and A.G. Zhou (*Henan Polytechnic University, China*)
- [39] **(F4-105) Metal foam current collector for lithium metal anode**
B. Sun¹, M.H. Fang¹, Z.H. Huang¹ and H. Wu² (¹*China University of Geosciences Beijing, China*; ²*Tsinghua University, China*)
- [40] **(F4-108) High-performing silicon-graphene composite anode materials produced by high-power-tip-sonication method for lithium-ion batteries**
Z.Y. Zhu and J.W. Wang (*Harbin Institute of Technology Graduate School, China*)
- [41] **(F5-101) The electrical properties and conduction mechanism of $\text{Bi}_{0.85+x}\text{La}_{0.15}\text{FeO}_{3-y}$ ceramics**
H.B. Gou, Q.Y. Fu, C.H. Wang, Y.H. Tian, X.H. Zou, Z.P. Zheng, Y.X. Hu and W. Luo (*Huazhong University of Science and Technology, China*)
- [42] **(F5-103) Preparation of β'' -alumina solid electrolyte material with Eta type nanometer alumina powders**
C. Zhang, L. Zhang, Y.N. Chang and J.H. Liu (*University of Science and Technology Liaoning, China*)
- [43] **(F5-105) Skutterudite with graphene-modified grain-boundary complexion enhances zT enabling high-efficiency thermoelectric device**
P.A. Zong¹, C.L. Wan¹, L.D. Chen² and G.J. Snyder³ (¹*Tsinghua University, China*; ²*Shanghai Institute of Ceramics, CAS, China*; ³*Northwest University, USA*)
- [44] **(F6-101) The energy storage properties of sandwich structured thin films**
Y. Zhou, W. Wang, Y.W. Guo, L. Song, H. Ke and Y. Zhou (*Harbin Institute of Technology, China*)
- [45] **(F6-103) Thermal-mechanical-electrical coupled design of multilayer energy storage ceramic capacitors**
Z.M. Cai, X.H. Wang, B.C. Luo and L.T. Li (*Tsinghua University, China*)
- [46] **(F7-101) A facile synthesis of NiFe_2O_4 with high specific capacitance as supercapacitor electrode material**
X.C. Gao, J.Q. Bi, W.L. Wang and G.X. Sun (*Shandong University, China*)
- [47] **(F7-102) Preparation and properties of biological porous carbon/PEG composite phase change materials**
Y.J. Zhao, X. Min, M.H. Fang, X.W. Wu, Y.G. Liu and Z.H. Huang (*China University of Geosciences (Beijing), China*)
- [48] **(F7-103) Sol-gel synthesis and structure, electronic-ionic conductivities and impedance behavior of Y,Fe co-doped SrTiO_3 mixed conductor**
K. Shan¹, F.R. Zhai¹, Z.Z. Yi¹, Z.J. Li¹, Y.B. Mao¹ and Z.P. Xie² (¹*Honghe University, China*; ²*Tsinghua University, China*)

- [49] **(F7-104) Preparation of a black Ti₄O₇ photothermal conversion material**
C.Y. Ma^{1,2}, X.Y. Li¹, J.Q. Li¹ and J.L. Zhao² (¹*Institute of Process Engineering, CAS, China;* ²*Hebei University of Technology, China*)
- [50] **(F7-105) Preparation and conductivity of LSGM-(Li/Na)₂CO₃ composite electrolyte**
X.P. Lin¹, S. Xu¹, D.S. Ai¹ and B. Ge^{1,2} (¹*Tsinghua University, China;* ³*China University of Mining and Technology, China*)
- [51] **(F7-106) Properties characterization of tungsten doped strontium ferrites as cathode materials for intermediate temperature solid oxide fuel cells**
Z.W. Zhu¹, Z.L. Wei^{1,2}, Y.J. Zhao¹, M.N. Chen² and S. Wang¹ (¹*Qilu University of Technology, China;* ²*Shandong Normal University, China*)
- [52] **(G1-101) Phase stability and thermophysical properties of La_{2-x}Gd_xMo₂O₉**
Y. Sun, Z.X. Qu and Z.C. Liu (*Beijing University of Technology, China*)
- [53] **(G1-106) Thermal physics properties of RE₃TaO₇ (RE=Nd, Sm, Eu, Gd, Dy,) as promising thermal barrier coatings**
L. Chen, Y.H. Jiang and J. Feng (*Kunming University of Science and Technology, China*)
- [54] **(G1-107) The effect of ZrO₂ alloying on the microstructure and thermal properties of DyTaO₄ for thermal barrier coating application**
P. Wu¹, X.Y. Chong², Z.H. Ge¹, M.Y. Hu¹, P. Song¹ and J. Feng¹ (¹*Kunming University of Science and Technology, China;* ²*Pennsylvania State University, USA*)
- [55] **(G2-102) Study of glass-ceramic coating on 430 stainless steel plate with high temperature oxidation resistance**
Y.J. Huang, S.X. Wang, W.J. Wang and H.F. Lan (*Shantou University, China*)
- [56] **(G2-103) SiC nanowires/SiC coating to protect carbon bonded carbon fiber composites against oxidation**
L. Su, H.J. Wang, L. Liang, M. Niu and X.Y. Fan (*Xi'an Jiaotong University, China*)
- [57] **(G2-104) A novel approach for fabricating Fe₂V₄O₁₃ coating on steel substrate**
J. Li, H.P. Li, D.D. Zhang, S.Y. Hu, Z. Su and Y.W. Yan (*Huazhong University of Science and Technology, China*)
- [58] **(G2-105) Effect of MoSi₂ addition on microstructure and oxidation resistance of vacuum plasma sprayed TiB₂-MoSi₂ coatings**
L.P. Huang, Y.R. Niu, J. Zhao, H. Ji, X.B. Zheng and C.X. Ding (*Shanghai Institute of Ceramics, CAS, China*)
- [59] **(G2-107) Effect of oxidation time on isothermal oxidation behaviors of high power pulsed magnetron sputtered TiAlN coatings at 700°C**
H. Zhang, W.J. Chang, X.F. Liu, J. Lin, B.E. Zhao and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [60] **(G2-108) Oxidation behavior of Cr_{1-x}Al_xN coatings deposited by closed field unbalanced magnetron sputtering at 800°C**
W.J. Chang, H. Zhang, L. Long, C.G. Luo, X.R. Li and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [61] **(G2-109) Tribological performances of CrSiN coatings deposited by high power pulsed magnetron sputtering**
W.J. Chang, H. Zhang, Y.Y. Chen, J. Li, P.Z. Jiang, X.W. Fan and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [62] **(G3-101) Preparation and properties of MoSi₂/Al₂O₃/SiO₂ composite coating for mullite fibrous insulation**
L.L. Guo^{1,2}, X. Tao¹, A.R. Guo¹ and J.C. Liu¹ (¹*Tianjin University, China;* ²*Cangzhou Normal University, China*)
- [63] **(G3-102) Preparation and characterization of chromium oxide/alumina composites ceramic coating**
G.B. Li¹, X.C. Lai², G.K. Zhang², F.L. Yang², M.Q. Xiang¹, Y.S. Li¹, J.Q. Dong¹, C.C. Ge¹, Q.Z. Yan¹ and Y.C. Zhang¹ (¹*University of Science and Technology Beijing, China;* ²*Chinese Academy of Engineering Physics, China*)

- [64] **(G3-104) Thermal shock behavior and bonding strength of MoSi₂-BaO-Al₂O₃-SiO₂ gradient porous coating with polymethyl methacrylate addition for porous fibrous insulations**
Y.Y. Su, X.L. Li, H.J. Tang, Z.H. Zhao and J. He (*Tianjin University, China*)
- [65] **(G5-101) Obtaining alumina coatings on steel substrates by electrophoresis method**
I. Rutkowska, E. Długon, M. Gawęda and M. Sitarz (*AGH University of Science and Technology, Poland*)

Poster Presentations

14:00 ~ 18:00, November 7

- [1] **(G6-101) Measurement of C_f/SiC composite fiber bundle surface based on an optical system**
J.H. Wei and Bin Lin (*Tianjin University, China*)
- [2] **(G7-103) Effect of Si content on micro-properties of TiSiN coatings deposited by plasma enhanced magnetron sputtering**
H. Zhang, W.J. Chang, C. Huang, C.G. Luo, Y.D. Hu and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [3] **(G7-104) Influence of bias voltage on properties of TiAlSiN coatings produced by closed field unbalanced magnetron sputtering**
W.J. Chang, H. Zhang, L. Long, C.G. Luo, L.H. Yuan and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [4] **(G7-105) Effects of bias voltage on microstructure, hardness and bonding strength of TiN coatings deposited by high power pulsed magnetron sputtering**
W.J. Chang, H. Zhang, X. Xue, S. Liu, L. Long, J.F. Yang and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [5] **(H3-101) Microstructure, optical, and scintillation properties of Ce:Gd₂YAl₂Ga₃O₁₂ transparent ceramics**
S.L. Chen, B.X. Jiang and L. Zhang (*Shanghai Institute of Optics and Fine Mechanics, CAS, China*)
- [6] **(H3-102) Low-temperature solution-grown CsPbBr₃ single crystals for High-energy radiation detection**
Z.P. Zheng, S. Zhang, M.Z. Zhang, C. Chen, Y.X. Hu, W. Luo and Q.Y. Fu (*Huazhong University of Science and Technology, China*)
- [7] **(H5-102) Microstructure, optical, and mechanical properties of infrared transparent 3Y-TZP ceramics**
X. Hu, B.X. Jiang, X.W. Jiang and L. Zhang (*Shanghai Institute of Optics and Fine Mechanics, CAS, China*)
- [8] **(H5-105) Preparation and characterization of Na₂O-Y₂O₃-P₂O₅-SiO₂ transparent glass ceramics**
M.J. Zhao¹, Q.L. Wei¹, X.Y. Zou¹, S. Meng¹, H.B. Zhang¹, C.H. Su^{1,2} (¹*Changchun University of Science and Technology, China*; ²*Changchun Normal University, China*)
- [9] **(H5-106) Thermal decomposition of Nd:YAG precursor synthesized by a spray co-precipitation**
W. Jing^{1,2}, S.Q. Yu^{1,2}, F. Li¹, X.B. Ji¹, T. Xu^{1,2}, Z.B. Pan^{1,2}, Z.R. Yuan^{1,2}, B. Kang^{1,2}, J.G. Deng^{1,2}, W.L. Yin^{1,2} and H. Huang¹ (¹*China Academy of Engineering Physics, China*; ²*Sichuan Research Center of New Materials, China*)
- [10] **(H5-109) Preparation and properties of Cr, Nd:YAG transparent ceramics by grouting method**
X.J. Wan, Y.C. Zhang, M. Wang, Y. Liu and Y.S. Li (*University of Science and Technology Beijing, China*)
- [11] **(H5-111) Crystallization and optical properties of Sr₃Al₂O₆-SrAl₂O₄ eutectic glass**
J.X. Liu¹, G. He¹, N. Lu¹, J.T. Li¹, J.Q. Li² and C.Y. Ma² (¹*Technical Institute of Physics and Chemistry, CAS, China*; ²*Institute of Process Engineering, CAS, China*)
- [12] **(H5-112) Fabrication and optical spectrum properties of Sm³⁺ doped Y₂O₃ transparent ceramics**
Z.W. Hu¹, X.D. Xu¹, J. Wang², P. Liu¹, D.Z. Li, X.D. Wang³, J. Zhang⁴, J. Xu⁵ and D.Y. Tang¹ (¹*Jiangsu Normal University, China*; ²*Nanyang Technological University, Singapore*; ³*Suzhou University of Science and Technology, China*; ⁴*Shanghai Institute of Ceramics, CAS, China*; ⁵*Tongji University, China*)
- [13] **(H5-113) Highly transparent Er:SrF₂ ceramics prepared by hot pressing sintering using chemically derived powder**
J. Liu¹, P. Liu¹, X.D. Xu¹, D.Y. Tang¹, J. Xu², J. Zhang³ and S.W. Wang³ (¹*Jiangsu Normal University, China*; ²*Tongji University, China*; ³*Shanghai Institute of Ceramics, CAS, China*)

- [14] **(H5-114) Fabrication of full dense zinc selenide ceramics by spark plasma sintering**
J.L. Gao¹, J. Zhang², P. Liu¹, X.D. Xu¹ and D.Y. Tang¹ (¹Jiangsu Normal University, China; ²Shanghai Institute of Ceramics, CAS, China)
- [15] **(H6-105) Energy transfer and spectroscopic characterization of new green emitting Li₃Ba₂Gd₃(WO₄)₈:Tb³⁺ phosphor**
W.L. Guo, Y.T. Jiao and F. Hou (Tianjin University, China)
- [16] **(H6-107) Synthesis and luminescence properties of Sm³⁺ doped Na³GdP₂O₈ orange phosphor for applications in w-LED**
M.L. Xie, X. Min, C. He, M.H. Fang, Z.H. Huang, Y.G. Liu and X.W. Wu (China University of Geosciences (Beijing), China)
- [17] **(H6-108) Photoluminescent properties of AlN powders made from a wet chemical route**
X. Huang, Y.L. Cheng and H.T. Lin (Guangdong University of Technology, China)
- [18] **(H6-110) Synthesis of Nd³⁺ doped mesoporous SiO₂ powders by hydrothermal method**
D. Chen, L.J. Wang and W. Jiang (Donghua University, China)
- [19] **(H6-112) The effects of halogen exchange on the structural features and photoluminescence of Y/Eu layered rare-earth hydroxide (LRH) nanosheets**
X.L. Wu, J.J. Huang, Q.R. Liu, F. Long and Z.G. Zou (Guilin University of Technology, China)
- [20] **(I1-104) Synthesis of very-long silver nanowires**
H. Xie¹, X. Yang², D. Du², H. Xie¹ and Y. Wang¹ (¹University of Electronic Science and Technology of China Zhongshan Institute, Zhongshan, China; ²University of Electronic Science and Technology of China, China)
- [21] **(I1-106) Synthesis of ordered AlN nanoarray and its photoluminance property**
M.Z. Hu¹ and X. Huo² (¹Liupanshui Normal University, China; ²Environment Protection Agency of Zhongshan District, Liupanshui, China)
- [22] **(I1-107) Electrospinning fabrication and characterization of spinel-type MgAl₂O₄ micro/nanofibers**
F. Zhao¹, X.J. Tang¹, X.J. Wu² and J.S. Li¹ (¹Army Engineering University, China; ²63713 Troops of PLA, China)
- [23] **(I2-101) Hydrothermal method preparation of flower-like Ce-doped ZnO as an efficient photocatalyst**
J.P. Ai, W.X. Liao, T. Zhou, S.S. Luo, L.H. Cheng, Z.Q. Chen, Y. Zhang and W.K. Li (Jiangxi Science & Technology Normal University, China)
- [24] **(I2-102) Preparation and properties of ZnO nano crystals by chemical bath deposition**
R.F. Zhong, Z. Liu, L. Zhang and S.W. Duo (Jiangxi Science & Technology Normal University, China)
- [25] **(I2-103) Facile synthesis of different-scale silver nanocubes in ethylene glycol**
L. Su, L.J. Wang and W. Jiang (Donghua University, China)
- [26] **(I4-102) Effect of pH on crystal structure and photocatalytic performance of BiVO₄ by hydrothermal synthesis method**
J.K. Li, X. Liu, Y.X. Wang and P.C. Guo (Jingdezhen Ceramic Institute, China)
- [27] **(I4-104) Facile fabrication of visible-light-driven plasmonic photocatalyst Ag/Bi₇Ta₃O₁₈ by photodeposition-hydrothermal method**
H.W. Li, H.K. Zhu, M. Wang, X. Min, M.H. Fang, Z.H. Huang, Y.G. Liu and X.W. Wu (China University of Geosciences (Beijing), China)
- [28] **(I4-106) Zn/Cr layered double hydroxides composites for methyl orange(MO) sorption and evolved photocatalytic functionality**
T. Zhou, J.P. Ai, W.X. Liao, L.H. Cheng, Y. Zhang, R. Jiang, Z.Q. Chen and W.K. Li (Jiangxi Science & Technology Normal University, China)
- [29] **(I4-107) Study on synthesis process and photocatalytic properties of Fe₃O₄/TiO₂ composite**
J.C. Rong, W. Zhao and N.Q. Liu (Tianjin Chengjian University, China)
- [30] **(I4-108) Fabrication of CoAPO-5 catalyst and its application for organic dye degradation**
L.F. Qiu, Z.W. Zhou, X.B. Qiu and S.W. Duo (Jiangxi Science and Technology Normal University, China)

- [31] **(I4-109) Synthesis of CoAPO-5/graphene heterogenous photocatalyst and its application for organic dye degradation under visible light**
L.F. Qiu, Z.W. Zhou, X.B. Qiu and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [32] **(I4-110) Method and effect of remove boron rich layer in solar cell**
Z.Y. Yu^{1,2}, S. Jiang², Z. Chen¹, X.W. Dai¹, R.F. Zhong¹, K. Tao², C. Zhang², S.W. Duo¹ and R. Jia²
(¹*Jiangxi Science and Technology Normal University, China*; ²*Institute of Microelectronics, CAS, China*)
- [33] **(I4-111) Low-dimensional nanostructured photocatalysts**
H.M. Xu¹, M.R. Tang², Y.Y. Gang² and L.N. Qiao¹ (¹*Tsinghua University, China*; ²*The Experimental High School Attached to Beijing Normal University, China*)
- [34] **(I5-101) Microstructure and electrochemical properties of polyacrylonitrile-based carbon micro- and nanofibers fabricated by centrifugal spinning**
H. Zhao, X. Min, X.W. Wu, H. Wang, J. Liu, Z.J. Zhang, Z.H. Huang, Y.G. Liu and M.H. Fang (*China University of Geosciences, Beijing, China*)
- [35] **(I5-102) A mesoporous SiO₂/dense SiO₂/Fe₃O₄ multiply coated hollow microsphere: synthesis and application on laccase immobilization**
Z.J. Ma, Q.Y. Li, K.R. Ma, Q. Wei, S.P. Cui and Z.R. Nie (*Beijing University of Technology, China*)
- [36] **(I5-103) Synthesis of hollow network Fe₃O₄/SiO₂/meso-TiO₂ (FSmT) composite microspheres and its photocatalytic performance in degradation of methyl orange**
K.R. Ma, Q.Y. Li, Z.J. Ma, Q. Wei, S.P. Cui and Z.R. Nie (*Beijing University of Technology, China*)
- [37] **(I5-104) Synthesized of ZnS:F quantum dots modified by L-cysteine for biomarkers**
X.X. Wang, S.Z. Wang, Z. Chen, R.F. Zhong and S.W. Duo (*Jiangxi Science and Technology Normal University, China*)
- [38] **(J1-102) Synthesis and thermal stability of two-dimensional carbide MXene V₂C**
B.X. Wang, A.G. Zhou, L.B. Wang and Q.K. Hu (*Henan Polytechnic University, China*)
- [39] **(J1-107) Synthesis of two dimensional SnS₂ nanosheets by high temperature chemical bath method**
W. Shan, Z.Q. Fu, Z.F. Liu and Y.X. Li (*Shanghai Institute of Ceramics, CAS, China*)
- [40] **(J2-101) Synthesis of boron nitride coating on graphene**
G.X. Sun, J.Q. Bi, W.L. Wang, X.X. Hao and X.C. Gao (*Shandong University, China*)
- [41] **(J2-103) Carbon dioxide adsorption of MXene Ti₂C**
H.T. He, B.X. Wang, A.G. Zhou, L.B. Wang and Q.K. Hu (*Henan Polytechnic University, China*)
- [42] **(J3-105) Influence of annealing atmosphere on microstructure and electrical properties of ZnO thin films**
J. Shang, L.Y. Zheng, X. Shi, J.T. Zeng and G.R. Li (*Shanghai Institute of Ceramics, CAS, China*)
- [43] **(J4-101) Effects of combination method on the electrochemical performance of graphene-CaTi₂O₄(OH)₂ electrode material**
Q.F. Bao, W.X. Dong, X.Y. Gu and L.Y. Huang (*Jingdezhen Ceramic Institute, China*)
- [44] **(J7-101) Using superhydrophobic SU-8 film as the dielectric for electrowetting-on-dielectric**
Y.H. Piao and W.Q. Wang (*Nanjing University of Science and Technology, China*)
- [45] **(SB4-103) Hot pressing of (Zr_xHf_{1-x})B₂-SiC ultra high temperature ceramics**
X.T. Zhao¹, H.L. Wang¹, G. Shao¹, B.B. Fan¹, H.X. Lu¹, H.L. Xu¹, D.L. Chen¹ and R. Zhang^{1,2}
(¹*Zhengzhou University, China*; ²*Zhengzhou University of Aeronautics, China*)
- [46] **(SC1-101) Design and preparation of ATF cladding material using SiC coated carbon fiber**
R.Z. Liu, J.X. Chang and M.L. Liu (*Tsinghua University, China*)
- [47] **(SC1-102) Preparation and characterization of SiC nanoparticles for ATF-FCM**
Z. Chen, R.Z. Liu, J.X. Chang and M.L. Liu (*Tsinghua University, China*)
- [48] **(SD2-101) Piezoelectric properties of 0.87BNT-0.087BKT-0.043BT lead-free ceramics**
Z.T. Li^{1,2}, Z.Z. Du¹, C.L. Zhao¹, J.F. Li¹, J. Chen² and K. Wang¹ (¹*Tsinghua University, China*; ²*University of Science and Technology Beijing, China*)
- [49] **(SF1-101) The preparation of geopolymers slurry for 3D printing freeforming**
W. Li, Q. Tang, K.T. Wang, X.S. Lv and X.M. Cui (*Guangxi University, China*)

- [50] **(SF1-102) Microstructure and properties of fly ash/geopolymer composites**
M.R. Wang, H.F. Yang, P.G. He, D.C. Jia and Z.Y. Xi (*Harbin Institute of Technology, China*)
- [51] **(SF1-104) P-type molecular sieve antibacterial agent and hydrothermal control**
S.S. Gao, N.C. Chen, X.L. Wang, Y.C. Pei, X.J. Meng and Y.Y. Shen (*Guilin University of Technology, China*)
- [52] **(SF3-101) Preparation of thermal energy storage coating based on geopolymers**
X.S. Lv, P. Guo, J. Sun, H.F. Liu and X.M. Cui (*Guangxi University, China*)
- [53] **(Z0-104) Enhanced thermal expansion by micro-displacement amplifying mechanical metamaterial**
L.L. Wu, X.Q. Xi, B. Li and J. Zhou (*Tsinghua University, China*)