

# International Workshop on Ceramics for Sustainable Society

陶瓷材料与社会可持续发展国际研讨会



**Guangdong University of Technology**  
**Guangzhou, China**  
**May 23-24, 2019**

# Programme Schedule

*May 23, Thursday (Aloft Hotel, Higher Education Mega Center)*

## **Registration**

**(18:30 - 21:00)**

## **Welcome Dinner Reception**

*May 24, Friday (Conference Hall N°. 1, GDUT Auditorium)*

**(8:30 - 8:45)**

## **Opening Ceremony**

(Leader of the GDUT)

**(8:45 - 8:55)**

## **Opening Remark**

(Prof. Hua-Tay Lin, Chair of the Workshop)

**(9:00 - 10:00)**

**Chair: Prof. Hua-Tay Lin (GDUT, China)**

(9:00 - 9:30)

## **Enhanced Thermal Conductivity in Silicon Nitride with Carbon Addition**

(Dr. Hai-Doo Kim, KIMS, Korea)



Dr. Hai-Doo Kim, the past President of Korea Institute of Materials Science and Korean Ceramic Society, has made outstanding contribution to the science and technology of advanced ceramics. Dr. Kim is one of the leading experts on the engineering design of SRBSN ceramics and components targeting various industrial applications in Korea. Dr. Kim is the Academician of the World Academy of Ceramics and Fellow of the American Ceramic Society. Dr. Kim published 120 peer reviewed SCI papers, edited 1 book, 65 patents on novel fabrication process of alumina, zirconia, silicon nitride, silicon carbide, porous ceramics and strong/tough ceramics.

(9:30 - 10:00)

## **Challenges and Issues in Additive Manufacturing of Ceramic Components**

(Dr. Tatsuki Ohji, AIST, Japan)



Dr. Tatsuki Ohji is a Prime Senior Research Scientist of AIST, Japan. Dr. Ohji is now focusing on the research subjects as mechanical property characterization of ceramics, ceramic composites and porous materials; microstructural design of advanced ceramic materials for better performance; meso-macro porous/nano array structure controls of oxide ceramics thin films; and green manufacturing of ceramic components. He has authored or coauthored more than 330 peer-reviewed papers and 12 book chapters, edited 30 book volumes, chaired or co-chaired more than 30 international conferences and symposia, and hold more than 40 patents. Dr. Tatsuki is now the President-elect of the American Ceramic Society, Fellow of the ACerS, AAAS, and ASM International, and Academician of the World Academy of Ceramics.

**(10:00 - 10:30)**

## **Photos and Coffee Break**

(10:30 - 12:00)

Chair: Dr. Tatsuki Ohji (AIST, Japan)

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(10:30 - 11:00)

**Polymer-Derived Ceramics: Sustainable Materials for Energy Conversion and Storage**

(Prof. Ralf Riedel, Technische Universität Darmstadt, Germany)



Dr. Ralf Riedel is currently the Dean of the Materials and Earth Sciences Department at the Technische Universität Darmstadt, Germany. His current research interest focuses on synthesis and structural and functional properties of advanced ceramics as well as on ultra-high pressure synthesis of new materials. Dr. Riedel is the Editor-in-Chief of the Journal of the American Ceramic Society and Ceramics International, the Fellow of the American Ceramic Society, and the European Ceramic Society. He is also an Academician of the World Academy of Ceramics.

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(11:00 - 11:30)

**Smart Powder Processing for Advanced Materials**

(Prof. Makio Naito, Osaka University, Japan)



Dr. Makio Naito is a Professor at the Joining and Welding Research Institute in Osaka University, also serves as the President of The Society of Powder Technology and the director of The Association of Powder Process Industry and Engineering, Japan. Dr. Naito's peer reviewed publications cover a wide range of studies in the fields related to the advanced materials and nanoparticle processing. He has authored or coauthored more than 600 technical articles, including about 300 refereed journal articles. He has contributed to 74 books with 25 books as an editor. He is a Fellow of the ACerS and is Academician of "World Academy of Ceramics", and the WAC Advisory Board member.

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(11:30 - 12:00)

**Research of Optical Ceramic Materials for Solid State Laser Applications**

(Prof. Yi-Quan Wu, Alfred University, USA)



Dr. Yi-Quan Wu is a Professor at the Inamori School of Engineering and the New York State College of Ceramics at Alfred University. His research interests include advanced ceramics, optical materials, nanostructured materials for energy, bio-solid materials, and functional films and coatings. Dr. Wu has received numerous awards and honors for his achievement. He is the author and co-author of more than 85 peer-reviewed publications, chaired or co-chaired more than 20 international conferences and symposia. He is now the Vice-President of the Ceramics Education Council of the ACerS.

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(12:00 - 14:00)

**Lunch Break**

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(14:00 - 15:30)

Chair: Dr. Hai-Doo Kim (KIMS, Korea)

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(14:00 - 14:30)

**Development of MAX Phases for Extreme Environments**

(Prof. Miladin Radovic, Texas A&M University, USA)



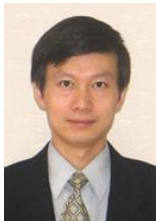
Dr. Miladin Radovic is a Professor at the Texas A&M University, and also serves as the Associate Department Head of the Department of Materials Science and Engineering and Director of Materials Characterization Facility. Dr. Radovic's research interests are related to the processing of advanced structural and multi-functional ceramics and ceramic composites for extreme environments and characterization and modeling of their mechanical behavior, oxidation/corrosion resistance and thermal properties. His current research is focused on the MAX phases, fast ionic conductors, geopolymers, and their composites. He has contributed to 7 books, and has authored or coauthored more than 150 technical articles.

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(14:30 - 15:00)

**High Thermal Conductivity Silicon Nitride**

(Dr. You Zhou, Osaka University, Japan)



Dr. You Zhou is a senior research scientist of National Institute of Advanced Industrial Science and Technology (AIST), Japan. His research interests are in processing ceramic powders and bulk materials by using novel methods such as microwave synthesis, combustion synthesis, pulse electric current sintering, reaction sintering, etc. He has published over 100 papers on the topics of fabrication and mechanical, tribological, electrical, thermal and optical properties of ceramics and ceramic matrix composites (silicon carbide, silicon nitride, SiAlON, boron carbide, alumina, zirconia, etc.).

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(15:00 - 15:30)

**Circular Economy and Sustainability of Ceramics in Columbia and Latin America**

(Prof. Henry Colorado, Universidad de Antioquia, Colombia)



Dr. Henry Colorado is a full Professor at the Faculty of Engineering at the Universidad de Antioquia, and also serves as the director of CCComposites Lab. He is a founder member and Vice-President of the Colombian Materials Society. His research is mainly involving new materials and composites fabricated with hazardous wastes, traditional ceramics and additive manufacturing for structural materials. Other area of research includes materials in arts, with several projects going on in collaboration between Engineering and the Arts Schools at Universidad de Antioquia. Dr. Colorado has currently active collaboration with Faculty from several schools abroad the world. Henry Colorado also is founder and a business partner of I+D Recycling Solutions, a start-up company located in Colombia for the processing of hazardous wastes.

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(15:30 - 16:00)

**Coffee Break**

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(16:00 - 17:30)

Chair: Prof. Yi-Quan Wu (Alfred University, USA)

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(16:00 - 16:30)

### History of Thermal Protection Systems

(Dr. Sylvia Johnson, NASA, USA)



Dr. Sylvia Johnson is the Chief Materials Technologist of the Entry Systems and Technology Division at NASA Ames Research Center (retired). She broadened her experience in materials research and development for a variety of materials and worked with industry, government, domestic and international clients. Dr. Johnson is a recipient of the 2011 James I. Mueller Award from the ACerS and was inducted into the World Academy of Ceramics in 2014. In addition to many lectures she has given on technical and research topics, Dr. Johnson has published over 50 papers, edited two books, and received 6 U.S. patents.

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(16:30 - 17:00)

### Fabrication of Crystal Oriented Sodium Bismuth Titanate - Barium Titanate Ceramics by Colloidal Forming in Magnetic Field and Subsequent Sintering and Electrical Poling

(Prof. Satoshi Tanaka, Nagaoka University of Technology, Japan)



Dr. Satoshi Tanaka is an Associate Professor of Nagaoka University of Technology, Japan. His research themes include functional polycrystalline ceramics, basic science of ceramic powder processing, and basic science of fabrication of all solid state battery. He won Global Star Award in 2019 and has published over 150 papers. Dr. Tanaka is also a co-author of 7 book chapters, which are related to powder technology, microstructure characterization, mechanical behavior of materials, ceramic engineering, etc.

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(17:00 - 17:30)

### Ceramics Era: Structures, Fractal Nature, and Sustainable Energy

(Prof. Voja Mitic, University of Belgrade/Nis, Serbia)



Dr. Vojislav Mitic is a Professor of University of Belgrade and University of Nis, and also serves as the Scientific Adviser in Institute of Technical Sciences of Serbian Academy. Major focus of his research is electronics materials, microstructure analysis, and fractal nature material analysis. He has published near 500 scientific publications where he pioneered application of fractal geometry and analysis in study of ceramics materials, nanotechnology and energetic issues. Dr. Mitic is the President of Serbian Ceramics Society, Chairmen of the Chapter of ACerS in Serbia, Fellow of ACerS, Member of European Academy of Sciences and Arts, World Academy of Ceramics, etc.

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(17:30 - 18:00)

### Controlled Microstructures, Properties and Modeling in Gelation-Freezing Derived Porous Ceramics

(Dr. Manabu Fukushima, AIST, Japan)



Dr. Manabu Fukushima is a Senior Researcher in the Ceramic Microstructure Control Group at AIST, Japan. Major focuses for his research work is to develop new processing methods to fabricate high performance thermal insulators, filters, catalyst supports and lightweight ceramics. Dr. Fukushima has authored or coauthored more than 70 peer-reviewed papers and 6 book chapters, contributed to 9 books, and hold 27 patents. Dr. Fukushima chaired the ICACC-2018 international conferences, and also serves as the Vice-President of the Engineering Ceramic Division of the ACerS.

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(18:30 - 21:30)

Closing Dinner

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# Map of GDUT Campus



**Guangdong Province Innovation Team for  
Advanced Manufacturing Technology of  
High-Tech Ceramics**

*Welcome You !*

**广东省高技术陶瓷先进制造技术创新团队  
欢迎您！**

