



Workshop on Advanced Inorganic Materials  
(WAIM 2016)

OCTOBER 16-18, 2016 SHANGHAI, CHINA

**CONFERENCE PROGRAM**

**Organized by:**

Donghua University (State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Research Institute of Functional Materials), China

**Sponsored by:**

National Institute for Materials Science , Japan

Shanghai Institute of Ceramics, CAS, China

University of Tsukuba, Japan

Shanghai University, China

Guangdong University of Technology, China



## Acknowledgements



(合作交流—NSFC-JSPS(中日))

Financial supports from the National Natural Science Foundation of China (No. 51611140121) are gratefully acknowledged.

-Design and advanced processing of strong Zr(Hf)B<sub>2</sub>-based ultra high temperature ceramics and MAX phase ceramics

-高强 Zr(Hf)B<sub>2</sub> 基超高温陶瓷和 MAX 相材料的设计与先进制备工艺研究

## Workshop on Advanced Inorganic Materials (WAIM 2016)

### Workshop on Advanced Inorganic Materials

October 16-18, 2016 | Liston Hotel | Songjiang District, Shanghai, China

Advanced inorganic materials are gaining much more attentions due to their unique property combinations of structural behaviors and abundant functionalities for applications in the fields of energy, environment, aerospace, electronics, health, medicine, and many others. With the successful experience of the first Workshop on Advanced Inorganic Materials (WAIM 2015, Shanghai), we cordially invite you to attend the WAIM 2016.

This workshop promotes the information exchange between the scholars, scientists and engineers from different research backgrounds. Young researchers are especially welcome to participate. The topics cover all aspects related to advanced inorganic materials including: Innovative processing and synthesis; Microstructure and interface tailoring; New functionalities and performance improvement; Mechanical properties and reliability prediction; Basic science, modeling and simulations; Industrial applications.

#### **Organizers:**

Zhang, Guo-Jun (Donghua University, China)

Sakka, Yoshio (NIMS, Japan)

Wang, Wenzhong (SICCAS, China)

Suzuki, Yoshikazu (University of Tsukuba, Japan)

Lin, Hua-Tay (Guangdong Univ. of Tech., China)

Tohru S. Suzuki (NIMS, Japan)

Jiang, Wan (Donghua University, China)

Ohji, Tatsuki (AIST, Japan)

Gu, Hui (Shanghai University, China)

Xu, Fangfang (SICCAS, China)

Gao, Yanfeng (Shanghai University, China)

Zhu, Meifang (Donghua University, China)

#### **Point of Contact:**

Zhang, Guo-Jun ([gjzhang@dhu.edu.cn](mailto:gjzhang@dhu.edu.cn), Donghua University, China)

## Workshop on Advanced Inorganic Materials (WAIM 2016)

### Organized by:

Donghua University (State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Research Institute of Functional Materials), China

### Sponsors:

National Institute for Materials Science (Research Center for Functional Materials), Japan

Shanghai Institute of Ceramics (State Key Laboratory of High Performance Ceramics and Superfine Microstructure), CAS, China

University of Tsukuba (Graduate School of Pure and Applied Sciences), Japan

Shanghai University (School of Materials Science and Engineering), China

Guangdong University of Technology (School of Electromechanical Engineering), China

**Venue:** Liston Hotel

**Address:** Sanxin North Road, 900 Lane, No. 610, Songjiang New Town (Thames town), Shanghai



Workshop on Advanced Inorganic Materials (WAIM 2016)

Program for Oct. 17, 2016

8:30-8:40		Opening Remarks	<b>Chair: Guo-Jun Zhang</b>
		<b>Session 1</b>	<b>Chair: Guo-Jun Zhang</b>
I-1 (8:40-9:10)	Sakka, Yoshio	National Institute for Materials Science, Japan	Development of electric current activated/ assisted sintering (ECAS) <b>(Invited)</b>
I-2 (9:10-9:40)	Lin, Hua-Tay	Guangdong University of Technology, China	Innovative Manufacturing of advanced silicon nitride ceramics <b>(Invited)</b>
I-3 (9:40-10:10)	Suzuki, Yoshikazu	University of Tsukuba, Japan	Self-organized formation of spherical porous granules only by one-step heat-treatment <b>(Invited)</b>
I-4 (10:10-10:40)	Gao, Yanfeng	Shanghai University, China	VO <sub>2</sub> Flexible Foils for Thermochromic Smart Window Applications <b>(Invited)</b>
10:40-11:00		<b>Group photo &amp; Tea break</b>	
		<b>Session 2</b>	<b>Chair: Hua-Tay Lin</b>
I-5 (11:00-11:30)	Wang, Hongzhi	Donghua University, China	Inorganic materials used for smart electrochromic films / fibers: old materials embrace a new spring <b>(Invited)</b>
O-1 (11:30-11:45)	Uchida, Yuichi	Tokyo University of Science, Japan	Fabrication and mechanical properties of textured Ti <sub>3</sub> SiC <sub>2</sub> MAX phase systems
O-2 (11:45-12:00)	Zhou, Beiyong	Donghua University, China	Silica-based luminescent glass prepared by spark plasma sintering
O-3 (12:00-12:15)	Kobayashi, Mariko	University of Tsukuba, Japan	Synthesis of SrTiO <sub>3</sub> nanoparticles by solution-derived processes
O-4 (12:15-12:30)	Ni, De-Wei	Shanghai Institute of Ceramics, China	A novel fabrication method for Cf/SiC-ZrC-ZrB <sub>2</sub> and its properties
12:30-14:00		<b>Lunch</b>	
14:00-17:00		<b>Poster and Discussion</b>	

## Workshop on Advanced Inorganic Materials (WAIM 2016)

### Program for Oct. 18, 2016

<b>Session 3</b>			<b>Chair: Yoshikazu Suzuki</b>
I-6 (8:30-9:00)	Suzuki, Tohru S.	National Institute for Materials Science, Japan	Microstructure control in bulk ceramics by colloidal processing in a magnetic field <b>(Invited)</b>
I-7 (9:00-9:30)	Mehdi Estili	National Institute for Materials Science, Japan	Water-dispersible Carbon Nanostructures to Fabricate Advanced Composite Materials <b>(Invited)</b>
I-8 (9:30-10:00)	Xu, Fangfang	Shanghai Institute of Ceramics, China	Structure-property relationships in SiAlON phosphors <b>(Invited)</b>
I-9 (10:00-10:30)	Fan, Yuchi	Donghua University, China	Graphene/metal oxide composites <b>(Invited)</b>
<b>10:30-10:50 Tea break</b>			
<b>Session 4</b>			<b>Chair: Yoshio Sakka</b>
O-5 (10:50-11:05)	Shih, Hsin-Yu	University of Tsukuba, Japan	Preparation and efficiency enhancement of lead-free perovskite solar cells
O-6 (11:35-11:50)	Liu, Hu-Lin	Shaanxi University of Science & Technology, China	Synergetic roles of ZrC and SiC on tailoring of microstructures and mechanical properties in ternary ZrB <sub>2</sub> -SiC-ZrC ceramic
O-7 (11:20-11:35)	Kawaguchi, Kanako	University of Tsukuba, Japan	Preparation and microstructure control of magnetoplumbite-type LaMgAl <sub>11</sub> O <sub>19</sub>
O-8 (11:05-11:20)	Ma, Haibin	Shanghai Institute of Ceramics, China	Effect of WC or ZrC addition on thermal residual stresses in ZrB <sub>2</sub> -SiC ceramics
I-10 (11:50-12:20)	Wang, Wenzhong	Shanghai Institute of Ceramics, China	Photo/thermo- synergistic catalysts towards solar energy conversion with high efficiency <b>(Invited)</b>
<b>12:20-14:00 Lunch</b>			
<b>14:00-17:00 Campus tour and Discussion</b>			

**Posters**

	<b>Presenter</b>	<b>Affiliation</b>	<b>Presentation</b>
P-1	Wu, Wen-Wen	Shaanxi Normal University, China	Microstructure and high-temperature strength of textured and non-textured ZrB <sub>2</sub> ceramics
P-2	Liu, Ji-Xuan	Shanghai Institute of Ceramics, China	High temperature strength of HfB <sub>2</sub> -SiC ceramics
P-3	Zhao, Tao	Donghua University, China	Monodisperse mesoporous TiO <sub>2</sub> microspheres for dye sensitized solar cells
P-4	Gu, Yifeng	Shanghai Institute of Ceramics, China	Pressureless sintering of titanium carbide doped with boron or boron carbide
P-5	Wang, Xin-Gang	Shanghai Institute of Ceramics, China	Defects, Microstructures Tailoring and Properties of ZrC Ceramics for Harsh Environment Applications
P-6	Li, Fei	Shanghai Institute of Ceramics, China	Preparation of zirconium carbide based cellular ceramics with open/closed cell structures via direct Foaming methods
P-7	Lu, Xiaofang	Donghua University, China	Preparation of AgNWs(AgNPs)/Bi <sub>2</sub> Te <sub>3</sub> nanocomposites with enhanced thermoelectric properties
P-8	Du, Yina	Shanghai Institute of Ceramics, China	Corrosion of Ti <sub>3</sub> AlC <sub>2</sub> and Ti <sub>2</sub> AlC in 500°C supercritical water
P-9	Bao, Weichao	Shanghai Institute of Ceramics, China	Modification of accident tolerant zircaloy surface with ceramics