



**INTERNATIONAL INSTITUTE OF WELDING**

**A world of joining experience**

Chair: Prof. Huaping Xiong  
Delegation: China

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## **Commission XVII: Brazing, Diffusion Bonding and Soldering**

### **Agenda for the 73<sup>rd</sup> Annual Assembly**

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15-25 July, 2020

#### **Program Summary**

<b>Time/Date</b>	<b>Online Meetings</b>
<b>13:00-16:00 CEST/ 23<sup>rd</sup> July (Thursday)</b>	<b>Commission XVII Meeting</b>
<b>13:00-16:00 CEST/ 24<sup>th</sup> July (Friday)</b>	<b>Commission XVII Meeting</b>
<b>13:00-16:00 CEST/ 25<sup>th</sup> July (Saturday)</b>	<b>Commission XVII Meeting</b>

#### **Remarks:**

The presentation time of 20 minutes includes 15 mins of presentation and 5 mins of questions and answers. This is applicable for everyday session.

## Thursday July 23, 13:00-16:00 CEST

1. **Opening Ceremony (0h00'-0h05')** (Chaired by Huaping Xiong)
2. **Welding in the World Presentation (0h05'-0h15')**
3. **Technical Presentations (Chaired by Huaping Xiong and Simon Jahn)**

XVIIA-0184-20	Effect of melting point depressants on the microstructure and the melting range of EHEA	Lukas Wojarski, TU Dortmund University, Germany	0h15'-0h35'
XVIIA-0185-20	Growth mechanism of Ag <sub>3</sub> Sn in network structure TLPs Cu/IMCs joints	Hong Li, Beijing University of Technology, China	0h35'-0h55'
XVIIIB-0051-20	Diffusion bonded large scale parts for tooling industry – results of bonding and injection molding trials	Simon Jahn, ifw Jena, Germany	0h55'-1h15'
XVIIA-0186-20	Microstructure and properties of YIG/bismuth-based composite glass/YIG joints with growth of in situ MgFe <sub>2</sub> O <sub>4</sub> whiskers	Panpan Lin, Harbin Institute of Technology, China	1h15'-1h35'
XVIIA-0187-20	Understanding the effect of surface machining on the YSZ/Ti6Al4V joint via image based modelling	Chun Li, Harbin Institute of Technology, China	1h35'-1h55'
XVIIA-0188-20	MIG brazing ability of coated steel sheets for automotive applications	Jessy Haouas, ArcelorMittal Global R&D, France	1h55'-2h15'
XVIIA-0189-20	Investigation of joints from selective laser melted and conventional material grades of 18MAR300 nickel maraging steel	Tim Henning, TU Dortmund University, Germany	2h15'-2h35'
XVIIA-0190-20	Effect of corrosion treatment on microstructure and mechanical property of C/SiC-Nb brazing joints	Junlei Qi, Harbin Institute of Technology, China	2h35'-2h55'

4. **Comment on Thursday Session (2h55'-3h00')**



## Friday July 24, 13:00-16:00 CEST

### 1. Introduction to the Agenda on the Second Day (0h00'-0h10')

(Chaired by Huaping Xiong)

### 2. Technical Presentations (Chaired by Huaping Xiong and Lukas Wojarski)

XVIIA-0191-20	Design on TiZrCuNi filler alloy for joining of titanium alloys	Yongjuan Jing, Beijing Institute of Aeronautical Materials, China	0h10'-0h30'
XVIIA-0192-20	Brazing of Ti-6Al-4V with a new copper-based brazing filler metal	Xu Liu, Beijing Non-ferrous Metals and Rare Earth Research Institute, China	0h30'-0h50'
XVIIA-0193-20	Model of the Mechanisms of Acting during Vacuum Brazing of Al and Cu	Ann-Kathrin Sommer, MAHLE International GmbH, Germany	0h50'-1h10'
XVIIIB-0052-20	Oxidation behavior and reactive air brazing of ferritic stainless steel interconnect coated by diffusion bonded cobalt layer for solid oxide fuel/electrolysis cells	Zhiquan Wang, Harbin Institute of Technology, China	1h10'-1h30'
XVIIIB-0053-20	An investigation on HIP diffusion bonding of GH99 alloy and MHC	Longge Zhang, Advanced Technology & Materials Limited Company, China	1h30'-1h50'
XVIIA-0194-20	Fracture Analysis of SiC/SiAlTi/SiC Thermally Aged Braze Joints After Shear Testing	Stephen Liu, Colorado School of Mines, USA	1h50'-2h10'
XVIIA-0195-20	Reactive air brazing of SOFC using Ag-CuO-Al <sub>2</sub> O <sub>3</sub> composite braze and the service performance evaluation	Xiaoqing Si, Harbin Institute of Technology, China	2h10'-2h30'
XVIIIC-0051-20	Mechanism of the interfacial bonding between sapphire and Sn-based solders at a low temperature in air by ultrasound	Xinran Ma, Harbin Institute of Technology, China	2h30'-2h50'

### 3. Comment on Friday Session (2h50'-3h00')



## Saturday July 25, 13:00-15:50 CEST

### 1. Introduction to the Agenda on the Third Day (0h00'-0h10')

(Chaired by Huaping Xiong)

### 2. Technical Presentations (Chaired by Huaping Xiong and Hong Li)

XVIIB-0054-20	Single-crystalline silver nanowire arrays directly synthesized onto substrates by template-assisted chemical wetting	Chenghao Zhang, Harbin Institute of Technology, China	0h10'-0h30'
XVIIA-0196-20	Dissimilar brazing of Nbss/Nb <sub>5</sub> Si <sub>3</sub> composites to GH5188 alloy using Ni-based filler alloys	Xinyu Ren, Beijing Institute of Aeronautical Materials, China	0h30'-0h50'
XVIIC-0052-20	The microstructure and strength of ultrasonic-assisted soldered joints of SiC/Al composites with SnZn filler alloy	Guojing Xu, Harbin Institute of Technology, China	0h50'-1h10'
XVIIA-0197-20	Joining of SiC <sub>f</sub> /SiBCN composite and control of the interfacial reactions	Wenwen Li, Beijing Institute of Aeronautical Materials, China	1h10'-1h30'
XVIIA-0198-20	Research on brazing of SiC <sub>f</sub> /SiC and GH3039	Xunye Zhang, Harbin Institute of Technology, China	1h30'-1h50'
XVIIA-0199-20	Joining of activated graphite to 6063 aluminum alloy with Al-Cu-Si-Ni-Mg filler metal	Linlin Yuan, Beijing Non-ferrous Metals and Rare Earth Research Institute, China	1h50'-2h10'
XVIIA-0200-20	Oxygen and oxide controlled wetting of silver-based brazing alloy on ZTA ceramic	Yifeng Wang, Chongqing University, China	2h10'-2h30'

### 3. Discussions and Closing Remarks (2h30'-2h50', Chaired by Huaping Xiong)

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