



## C-VII: Microjoining and Nanojoining

Agenda (Update: 3.07.2024)

77th Annual Assembly 2024, Rhodes

VII-0257-24

Authors: Jolanta JANCZAK-RUSCH

Comments: Face-to-Face Meeting

### Agenda for 77<sup>th</sup> Annual Assembly and International Conference Meeting

Monday July 8<sup>th</sup>, 14:30-18:30

Room: Rotisserie

Session I-1, Chair: Guisheng Zou and Susan Hausner

Time	Agenda Item/Presentation Title (Abstract No.)	Presenter	Document
14:30-14:50	Opening: welcome and introduction	Jolanta Janczak-Rusch	
14:50-15:10	High-efficiency laser direct writing of conductive micropatterns on dielectric substrate (304)	Ting Huang Beijing University of Technology, China	VII-0258-24
15:10-15:30	Nanopaste sinter-bonding for thin-film transfer and integration (173)	Bastian Rheingans Empa, Switzerland	VII-0259-24
15:30-15:50	Die-attach layer with high effective thermal conductivity by sintering optimized bimodal-silver particles film	Rongbao Du Tsinghua University, China	VII-0260-24
15:50-16:10	Multi-beam femtosecond laser processing for high performance titanium wicks	Yuxi Wu Tsinghua University, China	VII-0261-24
16:15-16:45	Coffee Break		

Session I-2, Chair: Tomokazu Sano and Jolanta Janczak-Rusch

Time	Agenda Item/Presentation Title	Presenter	Document
16:45-17:05	Interfacial energy assessment of Cu/Si <sub>3</sub> N <sub>4</sub> joints for power electronics substrate (145)	Hiroaki Tatsumi Osaka University, Japan	VII-0262-24
17:05-17:25	Synthesis of Spherical MnSe Nanoparticle as Cathode Material for Wearable Aqueous Zinc Ion Battery (316)	Yan Feng Harbin Institute of Technology, China	VII-0263-24
17:25-17:40	Investigation on the solderless Cu-Cu direct bonding using electrodeposited oriented copper film (471)	Zhi-Quan Liu Chinese Academy of Sciences, China	VII-0264-24
17:40-18:00	Microjoined catalyst electrodes by corrosion engineering for boosting electrocatalytic water oxidation (348)	Xiaohang Zheng Harbin Institute of Technology, China	VII-0265-24

**Tuesday July 9<sup>th</sup>, 9:00-13:00 and 14:30-18:30, Room: Nafsika B**  
**Joint meeting of C-VII Microjoining and Nanojoining and**  
**C-XVII on Brazing, Soldering and Diffusion Bonding with Nanomaterials**

Session II-1, Chair: **Jolanta Janczak-Rusch and Huaping Xiong**

Time	Agenda Item/Presentation Title	Presenter	Document
9:00- 9:05	Opening of Joint C-VII and C-XVIII Meeting Welcome and Introduction to the Commissions	Jolanta Janczak-Rusch and Huaping Xiong	
9:05- 9:15	Special presentation from IIW-TMB	Prof. Xiaoyan Li (chair) Dr. Stephan Egerland (previous chair)	
9:15- 9:25	Special presentation from WITW	Prof. Majid Farajian and Erdmuthe Raufelder (WITW)	
9.25-9:35	Special presentations from IIW Secretariat	Elisabetta Sciacaluga (IIW Secretariat) Luca Costa (IIW-CEO)	
9:35- 9:55	Effect of vacuum brazing on the microstructure and pseudoelasticity of NiTi shape memory alloy joints	Lukas Wojarski TU Dortmund, Germany	XVIIA-0300-24 VII-0266-24
9:55- 10:15	Ultrastrong and ductile transient liquid phase (TLP) bonding joints reinforced by ordered multi- precipitates	Lin Yuan City University of Hong Kong, China	XVIIIB-0074-24 VII-0267-24
10:15-10:35	Ceramic to metal dissimilar brazing for high temperature applications	Zhenzhen Yu Colorado School of Mines, United States	VII-0268-24 XVIIA-0302-24
10:35-10:55	Dissimilar laser brazing of aluminum alloy and galvannealed steel using dual beam (204)	Tomo Ogura Osaka University, Japan	VII-0269-24 XVIIA-0304-24
10:55-11:20	Coffee Break		

Session II-2, Chair: **Simon Jahn and Susann Hausner**

Time	Agenda Item/Presentation Title	Presenter	Document
11:20-11:40	Investigation on pulsed-current-assisted low temperature rapid diffusion bonding of Ti-6Al-4V alloy	Qiuguang Zhang Harbin Institute of Technology, China	XVIIIB-0073-24 VII-0270-24
11:40-12:00	Investigation of Multiple Chemical Systems for the Preparation of Nickel nanopastes (312)	Benjamin Sattler Chemnitz University of Technology, Germany	VII-0271-24 XVIIC-0071-24
12:00-12:20	Dissolving brittle phases in Ni based filler metals by adding W	Marvin Erck RWTH Aachen University, Germany	XVIIA-0307-24, VII-0272-24
12:20-12:40	Research on the in-situ high-entropy strengthening and toughening mechanism of TZM/Kovar alloy	Xinyu Ren	XVIIA-0308-24 VII-0273-24

	dissimilar brazed joints	Beijing Institute Aeronautical Materials, China	
12:40-13:00	Electrohydrodynamic Printing of Self-Reduced Soldered Silver Nanowire Electrodes for Flexible Aqueous Zinc Ion Batteries (315)	Shang Wang Harbin Institute of Technology, China	VII-0274-24 XVIIC-0072-24
13:00-13:10	Miscellaneous: Future joint meeting in IIW AA, International Conference on Brazing, Diffusion Bonding and Micro-Nano Joining, Intermediate meeting, etc. Discussions and Closing Remarks: submission of documents, paper recommendations to WITW, etc.	Huaping Xiong and Jolanta Janczak-Rusch	
13:10-14:30	Lunch Break		

**Wednesday July 10<sup>th</sup>, 14:30-18:30**  
**Room: Nafsika B**

Session III-1, Chair: **Peng Peng and Tomo Ogura**

Time	Agenda Item/Presentation Title	Presenter/Moderator	Document
14:30-14:50	Nano coatings: guidelines to incorporate new findings and developments into standardisation documents (211)	Rita Bola European Federation for Welding, Joining and Cutting (EWF), Portugal	VII-0275-24
14:50-15:10	Pulsed laser irradiation induced vacancies in CuO Nanowires (267)	Peng Peng University of Waterloo, Canada	VII-0276-24
15:10-15:30	The energy field characteristics of light-induced micro-zone for carbon nanotube welding (54)	Xiwen Lu Harbin Institute of Technology, China	VII-0277-24
15:30-15:50	<i>Best Practice Discussion 1: Joining with nanomaterials (C-VII-A)</i>	Jolanta Janczak-Rusch Susann Hausner	
15:50-16:10	<i>Best Practice Discussion 2: Laser micro-/nano-joining (C-VII-B)</i>	Tomokazu Sano Tomo Ogura	
16:15-16:45	Coffee Break		

Session III-2, Chair/Moderation: **Jolanta Janczak-Rusch and Tomokazu Sano**

Time	Agenda Item/Presentation Title	Moderator	Document
16:45-17:05	<i>Best Practice Discussion 3: Emerging micro-nanoprocessing (C-VII-C)</i>	Jolanta Janczak-Rusch Peng Peng	
17:05-17:25	Miscellaneous NMJ2025 conference, intermediate meeting, joint meetings @IIW annual meeting 2025, etc. Closing remarks	Jolanta Janczak-Rusch	