Program

[Oral Presentation]

Monday, December 12th, 2022

	Opening
09:30-09:45	Opening Remarks Kentaro Shinoda, AIST, Japan
	Keynote Lecture I Session Chair: Kentaro Shinoda (AIST)
09:45-10:30	(Keynote) A New Generation of Industrial RF-ICP Torches for Powder Processing and Synthesis Javad Mostaghimi, University of Toronto, Canada
10:30-10:50	Break
	Session I: Novel Spray Coatings Session Chair: Mohammed Shahien (AIST) & Masahiro Kusano (NIMS)
10:50-11:20	(Invited) The Trigger for the Discovery of the RTIC Phenomenon and the 28-year History of the AD Method Jun Akedo, AIST, Japan
11:20-11:50	(Invited) Mechanical, Thermal and Sliding Properties of Nano-Crystal Structured Zirconia Coating by AD Method Ryoto Takizawa, TOTO LTD., Japan
11:50-13:20	Lunch Break
13:20-13:50	(Invited) Broadening the Scope of Applications for Aerosol Deposition Thomas Stöcker, Heraeus Deutschland GmbH & Co. KG, Germany
13:50-14:20	(Invited) Dense Ceramic Coating Technology by Plasma-assisted Aerosol Deposition Method on Thermal Barrier Coating of Gas Turbine Blade Takumi Bohno, Mitsubishi Heavy Industries, LTD., Japan

14:20-14:50 (Invited) Porous Garnet Thermophotovoltaic Emitters Prepared by Plasma-Assisted Aerosol Deposition
Taizo Shibuya, NEC Corporation, Japan

14:50-15:10 Break

Session II: Evaluation and Characterization of Advanced Coatings

Session Chair: Hideki Kakisawa (NIMS) & Takashi Nagoshi (AIST)

15:10-15:40 (Invited) Advanced Interfacial Microstructure Characterization for Understanding Cold Spray Deposition
Yuji Ichikawa, Tohoku University, Japan

15:40-16:10 (TICS SP) Measurement of Coefficient of Thermal Expansion for Ceramic Coatings in Various States of Self-Standing, On-Substrate, and Fragmented Conditions
Hideki Kakisawa, NIMS, Japan

16:10-16:40 (TICS SP) Synchrotron X-ray Multiscale CT Observation of Sintering Process for Reliable Ceramics
Gaku Okuma, NIMS, Japan

16:40-18:00 **Poster Session**
Poster list is included at the poster session section below.

18:30-20:30 Banquet

Tuesday, December 13th, 2022

Keynote Lecture II

Session Chair: Kentaro Shinoda (AIST)

08:00-08:45	(Keynote) Photoactive Surfaces for Green Hydrogen Production by Kinetic Spraying Thomas Klassen, Helmut Schmidt University, University of the Federal Armed Forces Hamburg; Helmholtz-Zentrum Hereon GmbH, Geesthacht, Germany

Session III: Coatings for Carbon Neutrality

Session Chair: Makoto Watanabe (NIMS) & Masato Suzuki (AIST)

08:45-09:15	(Invited) Development and Evaluation of EBC for CMC Takeshi Nakamura, IHI Corporation, Japan
09:15-09:45	(Invited) Development of Hydrogen Energy Technologies for a Carbon Neutral Society Norihiko Iki, AIST, Japan
09:45-10:00	Break
10:00-10:30	(Invited) Synchrotron Radiation X-ray Diffraction Evidence for Chemical Bonding of Ferroelectric Ceramic Powders and Grain Orientations in Their Films Coated by Aerosol Deposition Method Yoshihiro Kuroiwa, Hiroshima University, Japan
10:30-11:00	(TICS SP) Oxidation Resistant Coatings on Ferritic Stainless Steel for SOFC Interconnector Hideyuki Murakami, NIMS, Japan
11:00-11:30	(TICS SP) Hybrid Aerosol Deposition Process and Its Applicability Towards Carbon Neutrality Mohammed Shahien, AIST, Japan
11:30-12:30	Lunch Break

Keynote Lecture III

Session Chair: Kentaro Shinoda (AIST)

12:30-13:15 (Keynote) Thermostructural Coatings for Enhancing the Efficiency and Sustainability of Heat Engines
Sanjay Sampath, Center for Thermal Spray Research, Stony Brook University, USA

Session IV: Remanufacturing and Digital Manufacturing

Session Chair: Mitsutaka Matsumoto (AIST) & Hideyuki Murakami (NIMS)

13:15-13:45 (Invited) How to Enable Solid-Phase Deposition of Polymers?
Kazuhiro Ogawa, Tohoku University, Japan

13:45-14:15 (TICS SP) Temperature Variation with Sample Geometry and Its Control During Laser Powder Bed Fusion Process
Masahiro Kusano, NIMS, Japan

14:15-14:30 Break

14:30-15:00 (TICS SP) The Remanufacturing Research in AMRI, AIST
Mitsutaka Matsumoto, AIST, Japan

15:00-15:30 (TICS SP) Materials Integration for Additive Manufacturing
Makoto Watanabe, NIMS, Japan

Panel Discussion

Moderator: Kentaro Shinoda (AIST)

15:30-16:15 Future Direction of Coating Research

Closing

16:15-16:30 Closing Remarks
Hideki Kakisawa, NIMS, Japan

[Poster Presentation]