

**[TS05T5]****Nanomaterials for Extreme Environments and Applications 5**

<b>Date &amp; Time</b>	July 4(Thu.), 2024 / 15:40-17:55
<b>Place</b>	Room 207
<b>Session Chair(s)</b>	Jae Bok Seol (Gyeongsang Nat'l Univ.)

**TS05T5\_I\_1 \*Invited 15:40-16:10****Atomic-Scale Observation of Twinning-Induced Phase Transformation in Ni-Based Superalloys**

Jae Bok Seol

*(Gyeongsang National University)***TS05T5\_I\_2 \*Invited 16:10-16:40****Formation of Disordered Nano Particles and their Influence on the Elevated Temperature Deformation of High Entropy Superalloys**Wei-Che Hsu<sup>1</sup>, Jhuo-Lun Lee<sup>1</sup>, Tso-Wei Chen<sup>1</sup>, Mainak Saha<sup>2</sup>, Takuma Saito<sup>2,3,4</sup>, Taisuke Sakaki<sup>2</sup>, Hideyuki Murakami<sup>2,4</sup>, You-Yi Lin<sup>5</sup>, You-Lun Hsu<sup>5</sup>, Tasi-Fu Chung<sup>5</sup>, Nien-Ti Tsou<sup>5</sup>, Ching-Yu Chiang<sup>6</sup>, and An-Chou Yeh<sup>1</sup>*(<sup>1</sup>National Tsing Hua University, <sup>2</sup>NIMS, <sup>3</sup>Ruhr University Bochum, <sup>4</sup>Waseda University, <sup>5</sup>National Yang Ming Chiao Tung University, <sup>6</sup>National Synchrotron Radiation Research Center)***TS05T5\_O\_3 16:40-16:55****Current Status of Development of Korean Reduced Ferritic/Martensitic Steel with Small Amounts of Ta and Ti**Chang-Hoon Lee<sup>1</sup>, Joonoh Moon<sup>2</sup>, Hyun-Uk Hong<sup>2</sup>, Chansun Shin<sup>3</sup>, and Hyoung Chan Kim<sup>4</sup>*(<sup>1</sup>KIMS, <sup>2</sup>Pusan National University, <sup>2</sup>Changwon National University, <sup>3</sup>Myongji University, <sup>4</sup>Korean Institute of Fusion Energy)***TS05T5\_O\_4 16:55-17:10****Utilization of Nano-Sized Precipitates to Enhance the Creep and Radiation Resistance of Austenitic Stainless Steels for Advanced Nuclear Systems**Changheui Jang<sup>1</sup>, Hyun Joon Eom<sup>1</sup>, Ji Ho Shin<sup>2</sup>, and Gokul Obulan Subramanian<sup>3</sup>*(<sup>1</sup>KAIST, <sup>2</sup>Korea Hydro and Nuclear Power Co., Ltd., <sup>3</sup>University of Michigan)*

TS05T5\_O\_5

17:10–17:25

**Investigating Weldability of Material Combinations for Supersonic High Pressure Vaporising Foil Actuator Welding through Meso–Scale and Nano Scale Computational Framework and Experimental Characterisation**

Deepak Kumar and Taeseon Lee  
*(Incheon National University)*

TS05T5\_O\_6

17:25–17:40

**Effect of Electron Temperature Model on Collision Cascades upon Neutron Irradiation through Molecular Dynamics Simulation**

Younggak Shin<sup>1</sup>, Keonwook Kang<sup>2</sup>, and Byeongchan Lee<sup>1</sup>  
*(<sup>1</sup>Kyung Hee University, <sup>2</sup>Yonsei University)*

TS05T5\_O\_7

17:40–17:55

**The Evolution of Microstructures in  $\text{Al}_{0.2}\text{Co}_{1.5}\text{CrFeNi}_{1.5}\text{Ti}_{0.3}$  High Entropy Alloy through Extreme Environmental Temperatures**

Che-Wei Tsai<sup>1</sup>, Ting-En Shen<sup>1</sup>, Jun-Jie Yang<sup>1</sup>, Hung-Chih Liu<sup>1</sup>, and Hung-Wei Yen<sup>1,2</sup>  
*(<sup>1</sup>National Tsing Hua University, <sup>2</sup>National Taiwan University)*

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