

## Symposium 7: Materials Challenges in Nuclear Energy

### February 26 (THU)

Time	Program	
	[S7-1] Materials Challenges in Nuclear Energy	
	Chair: Singh, Dileep (Argonne National Laboratory)	
13:30-14:00	[2186171] Development of Advanced Materials and Technologies for Nuclear Energy in Korea	Jeong, Yong Hwan (Korea Atomic Energy Research Institute)
14:00-14:20	[2111530] surface modification of high temperature materials in molten salts	Yu, Guojun (UNIST)
14:20-14:40	[2108494] The Role of Dissolved Oxygen on the Stress Corrosion Cracking of Ni-base Alloy 600 in a PWR Primary Water Environment	Lim, Yun Soo (Korea Atomic Energy Research Institute)
14:40-15:10	[2089702] Chemical Compatibility of SiC Ceramics and Composites in VHTR and PWR Relevant Coolant Chemistries	Kim, Weon-Ju (Korea Atomic Energy Research Institute)
15:10-15:30	[2090099] High-temperature Corrosion Characteristics of Nano-particle Enhanced Coatings for Secondary Piping Systems of Nuclear Power Plants	Kim, Seunghyun (UNIST)

Time	Program	
	[S7-2] Materials Challenges in Nuclear Energy	
	Chair: Huai, Ping (Shanghai Institute of Applied Physics)	
15:50-16:20	[2089674] Surface Modification Techniques for Ni-base Superalloys to Improve High Temperature Oxidation Resistance	Jang, Changheui (KAIST)
16:20-16:40	[2089824] Impedance Response of Surface Oxidation of Zirconium Alloy in PWR Primary Water Condition	Kim, Tae Ho (UNIST)
16:40-17:10	[2106896] Degradation and Thermal Properties of Porous ZrO <sub>2</sub> Thermal Barrier Coatings	Jang, Byung-Koog (National Institute for Materials Science (NIMS))
17:10-17:40	[0000000] Microstructural Stability of Silicon Carbide under Irradiation	Kondo, Sosuke (Kyoto University)
17:40-18:10	[2088439] The effect of carbon addition on the thermal and mechanical properties of ZrO <sub>2</sub> composites	Mistarihi, Qusai (KAIST)

### February 27 (FRI)

Time	Program	
	[S7-3] Materials Challenges in Nuclear Energy	
	Chair: Jang, Changhuei (KAIST)	
09:00-09:30	[2157107] Spark Plasma Sintering of MoO <sub>3</sub> for Production of Radioactive Isotopes	Suematsu, Hisayuki (Nagaoka University of Technology)
09:30-10:00	[2113973] Material Challenges for Thorium Molten Salt Reactor	Huai, Ping (Shanghai Institute of Applied Physics)

10:00-10:20	[2088970] Effects of direct/alternating current on the electrophoretic deposition of nano-SiC on SiC woven fiber fabrics	Yin, Jie (Korea Institute of Materials Science)
10:20-10:50	[2122724] Effect of applied stress on void swelling of irradiated 316 stainless steel: A phase-field approach2113973	Chang, Kunok (Korea Atomic Energy Research Institute)
10:50-11:10	[2089681] Evaluation of Plasma Thermal Performance of Multilayer PVD Tungsten Coating on Graphite for Nuclear Fusion Application	Kim, Hyunmyung (KAIST)