

First International Workshop on Materials and Mechanics for Fusion Energy

Programme

Thursday 29 August

09:00	Registration and Refreshments
09:15	Welcome
	Session I Chair: Guangnan Luo
09:20	PLENARY: A Phased Roadmap for the Development of Fusion Reactor Materials in China Yugang Wang , Peking University
10:00	Micro-Breeder Blanket: New experimental capability to investigate performance of breeder blanket system, including tritium breeding, of a fusion reactor using engineered fusion-relevant neutron spectrum Joven Lim , UKAEA/CCFE
10:30	Recrystallization and grain orientation dependence of surface morphology in helium-implanted tungsten after high-temperature annealing Long Cheng , School of Physics, Beihang University
11:00	Coffee Break
	Session I Chair: Chris Hardie
11:20	Continuum Dislocation Mechanics: bridging the scales Anish Roy , University of Loughborough
11:50	Multiscale Modeling for Irradiation Hardening of Tungsten Yao Shen , Shanghai Jiao Tong University
12:20	Micro-nano scale damage on tungsten/tungsten alloy surface under low-energy high flux hydrogen plasma exposure Wanqi Chen , China Nuclear Power Engineering Co., Ltd
12:40	Lunch
	Session III Chair: B Long
13:40	Study of radiation hardening and embrittlement of structural alloys by utilizing high-energy ions Chonghong Zhang , Institute Of Modern Physics, CAS

14:10	Impact of structural materials' in-service degradation scenario on fusion first-wall/blanket design Arunodaya Bhattacharya , University of Birmingham
14:40	R&D of advanced FM structural steels for fusion energy at IMR Wei Yan , Institute of Metal Research
15:00	A novel ODS-RAFM steels with excellent high-temperature mechanical properties by SLM Kailun Li , Institute of Engineering Thermophysics, Chinese Academy of Sciences
15:20	Coffee Break
	Session IV Chair: Anish Roy
15:40	KEYNOTE: Reviews on design strategy and scalable production routs of tungsten-based materials for nuclear fusion application Yucheng Wu , Hefei University of Technology
16:10	Project LiFTOFF - Lithium Facility by Oxford Sigma for Fusion Dr Thomas Davis , Oxford Sigma
16:40	Amorphous and anisotropic fatigue damage initiation on tungsten surfaces under repeated high-flux hydrogen plasma loads Yu Li , Institute of Plasma Physics, Chinese Academy of Sciences
17:00	One-step preparation and performance evaluation of SPTAs/CLAM joint via powder metallurgy route Xiaoyue Tan , Hefei University of Technology
17:20	Reception
18:30	End of Day 1

Friday 30 August

	Session V Chair: Yugang Wang
09:00	KEYNOTE: Recent Progress of PFMC R&D and Testing Facilities toward Fusion Reactor in ASIPP Guang-Nan Luo , Institute of Plasma Physics, Chinese Academy of Sciences
09:30	Nuclear materials research at the University of Birmingham Yu-Lung Chiu , University of Birmingham
10:00	Progress on Standardization of Mechanical Testing of Small-scale Samples for Fusion Reactor Materials Bin Long
10:30	Kyoto Fusioneering: Overview of Fusion Materials R&D Activities Mario Oliver , Kyoto Fusioneering
10:50	Coffee Break
	Session VI Chair: Thomas Davis
11:10	KEYNOTE: Prediction of material response in uncharted fusion environments Chris Hardie , Uk Atomic Energy Authority
11:40	High performance W-ZrC alloy and W nanoparticle reinforced Cu for plasma-facing components Rui Liu , Institute of Solid State Physics, HFIPS, Chinese Academy of Sciences
12:00	Modelling high-energy gamma-ray spectrum from deuteron-triton collisions Natalia Timofeyuk , University of Surrey
12:20	Equivalent Methods to Predict Cavity Swelling in Structural Materials Induced by Neutron Irradiation Chenxu Wang , Peking University
12:40	Lunch
13:40	Roundtable Industry Discussion
14:40	Tea Break
15:00	End and Depart