



Contribution ID: 73

Type: **Poster**

EX/P5-06: Cooling Characteristics and Mitigation of He-Defected Tungsten with Nanostructure Formation

Thursday, 11 October 2012 08:30 (4 hours)

The surface cooling mechanisms (mainly, decrease in secondary electron emission (SEE) and increase in radiation emissivity) of nanostructured tungsten (W) are summarized comprehensively. Recovery of He-defected W towards flat surface is demonstrated as well as the suppression of nanostructure formation by covering the surface with carbon thin film. The key factor for physical mechanism of nanostructure formation is given by comparing the surface temperature ranges for W (1000 ~ 1500 K) and tantalum (Ta) (< 900 K).

Country or International Organization of Primary Author

Japan

Primary author: Mr TAKAMURA, Shuichi (Japan)

Co-authors: Prof. OHNO, Noriyasu (Nagoya University); Mr MIYAMOTO, Takanori (Aichi Institute of Technology)

Presenter: Mr TAKAMURA, Shuichi (Japan)

Session Classification: Poster: P5

Track Classification: EXD - Magnetic Confinement Experiments: Plasma-material interactions; divertors; limiters; scrape-off layer (SOL)