International III Summer School on the Physics of Plasma-Surface Interactions

July 16–20, 2018, Moscow

July, 16 (Chair: A.A. Pisarev) – Monday **Assembly hall**

9:00	**Registration starts, MEPhI entrance**
10:00	**V. Kurnaev. Opening**
10:30–11:30	**A. Litnovsky**. Advanced materials for a future fusion plant
11:30–11:45	**Coffee break**
11:45–13:00	**Guido Van Oost.** "ITER and beyond"; Structural Materials for Fusion Devices
13:00–14:30	**Lunch**
14:30–15:30	**L. Begramdekov**. Tungsten coatings and coatings on tungsten
15:30–16:30	**A. Arakcheev**. Effects of transient heat load on materials

July, 17 (Chair: T. Tanabe) – Tuesday **Assembly hall**

9:00	Registration starts, MEPhI entrance
9:30–10:30	**J.-M. Layet**. Diagnostic of solids
10:30–11:30	**C. Grisolia**. Tritiated dust: their impact on tokomak safety
11:30–11:45	**Coffee break**
11:45–12:45	**A. Kukushkin**. SOLPS modeling of edge tokamak plasma
12:45–14:00	**Lunch**
14:00–15:30	**C. Bundesmann**. Systematics of (dual) ion beam sputter deposition
15:30–17:15	Student's talks **Chair**: A. Kreter

July, 18 (Chair: K. Nordlund) – Wednesday **Assembly hall**

9:30–11:00	**J. Strümpfel.** Industrial magnetron sputtering for large area deposition of functional coatings
11:00–11:15	**Coffee break**
11:15–12:45	**R. Pitts**. ITER project status
12:45–14:00	**Lunch**
14:00–15:30	**R. Pitts**. ITER divertor physics basis
15:30 – 16:00	**V. Ivanov**. Microplasma discharges exited by a plasma flow on the metals and alloys
16:00 – 17:30	Student's talks **Chair**: L. Zaharov
17:30	**Excursion to MEPhI labs**

July, 19 (Chair: C. Bundesmann) – Thursday **Assembly hall**

9:30–10:30	**K. Nordlund**. MD - Molecular dynamics of plasma materials interactions
10:30–11:30	**F. Djurabekova**. MC – Simulation of realistic RBS-C spectra from read-in atomistic structures damaged by high dose irradiation.
11:30–11:45	**Coffee break**
11:45–12:45	**T. Tanabe**. Interaction of hydrogen with fusion reactor materials
12:45–14:00	**Lunch**
14:00–15:00	**T. Tanabe**. Continued
15:00–16:45	Student's talks **Chair**: J. Horacek
17:00	**Conference dinner**

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July, 20 (Chair: L.B. Begrambekov) – Friday **Assembly hall**

9:30–10:30	**A. Kreter**. Research on plasma-material interaction in dedicated facilities
10:30–11:30	**J. Horacek**. Turbulence simulations compared with probes data
11:30–11:45	**Coffee break**
11:45–12:45	**J. Horacek**. ITER limiter optimization, divertor heat flux scalings, liquid metals for DEMO divertor
12:45–14:00	**Lunch**
14:00–15:00	**M. Mayer**. Deuterium retention in tungsten
15:00–16:00	**A.A. Pisarev**. Uncertainties in estimations of tritium accumulation in ITER divertor plates due to plasma implantation: Influence of basic parameters
16:00–17:00	**L. Zaharov**. MHD of liquid lithium in tokamak environment, lithium affect on confinement and on approach to tokamak fusion
17:00–17:30	**Closing**

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STUDENTS' TALKS

July, 17 (Chair: J. Horacek) – Tuesday **Assembly hall**

15:30–15:45	**Evgeny Anufriev**. Concept of lithium vapor box for DEMO-FNS divertor
15:45–16:00	**Anton Bernatskiy**. H_2O and HDO molecule dynamics in quartz tube in discharge and after its shutdown
16:00–16:15	**Olga Bidlevich**. Dust probe design optimization
16:15–16:30	**Coffee break**
16:30–16:45	**Irina Borodkina**. Wall conditioning strategy in the upcoming D, H and T experimental campaigns in JET-ILW
16:45–17:00	**Vassily Burwitz**. Temperature programmed desorption of helium in tungsten
17:00–17:15	**Tomi Vuoriheimo**. Low energy deuterium implantation and elastic recoil detection analysis as tools for studying tritium retention and defect formation in plasma-facing materials

July, 18 (Chair: L. Zaharov) – Wednesday **Assembly hall**

16:00–16:15	**Dmitrii Kiramov**. Plasma current profile force-free evolution in a tokamak during the current quench
16:15–16:30	**Alexey Lyashenko**. Computational studying of tungsten sputtering by nitrogen
16:30–16:45	**Coffee break**
16:45–17:00	**Arman Miniyazov**. Influence of a nitrided tungsten surface on the fuzz formation
17:00–17:15	**Nikolay Puntakov**. Behaviour of redeposited layers on tungsten during thermal and plasma loads
17:15–17:30	**Fedor Doronin**. Plasma chemical surface modification of flexible polymer substrates

July, 19 (Chair: J. Horacek) – Thursday **Assembly hall**

15:00–15:15	**Alexandr Poskakalov**. Structure transformation of tungsten under deuterium and helium plasma heat loads
15:15–15:30	**Anton Stepanov**. Simulation of carbon nanotubes defects formation under ion irradiation
15:30–15:45	**Anastasia Sycheva**. Role of porosity and pore size in structural changes of nanoporous silicon-based materials under low-energy ion irradiation
15:45-16:00	**Coffee break**
16:00 – 16:15	**Timur Tulenbergenov**. The results of gas emission analysis from samples on a plasma beam installation
16:15 – 16:30	**Vitali Shymanski**. Tungsten surface modification by compression plasma flow impact
16:30 – 16:45	**Ravi Ramakoti**. Ion exit from CdHgTe semiconductor's surface during interaction with soft x-ray produced by laser plasma