

3rd International School on Surface Science



“Technologies and Measurements on Atomic Scale”

23 – 29 September 2013, Khosta (Sochi), Russia

Lecture Program

Monday, September 23th

- 9.30 – 10.00 **Registration**
- 10.00 – 10.40 **Welcome & Introductory Remarks**
- 10.40 – 11.40 **Lecture 1.** *Alexander M. Shikin* “Spin-orbit coupling, spin currents and spin-torque effects in graphene-derived systems”
- 11.40 – 12.00 Coffee break
- 12.00 – 16.00 Lunch
- 16.00 – 17.00 **Lecture 2.** *Anatoly K. Zvezdin* “Spintronics: physics, materials, applications”
- 17.00 – 17.20 Coffee break
- 17.20 – 18.20 **Lecture 3.** *Alexander A. Shklyae*v “Structural surface transformations of Ge layers grown on Si by nanocontact epitaxy”
- 18.20 – 18.40 **Sponsor presentation 1.** INTERTECH
- 19.30 – 22.00 **Welcome party**

Tuesday, September 24th

- 9.00 – 9.45 **Lecture 4.** *Karina Morgenstern* “Structure and dynamics of water on surfaces”
- 9.50 – 10.35
- 10.35 – 10.55 Coffee break
- 10.55 – 11.25 **Invited talk 1.** *Alexei Kononov* “Fluorescent metal nanodots as a special class of nanoobjects”
- 11.25 – 11.45 **Sponsor presentation 2.** Nytek Instruments
- 11.45 – 16.00 Lunch
- 16.00 – 16.45 **Lecture 5.** *Matthias Bode* “Atomic scale spin structures on surfaces”
- 16.50 – 17.35
- 17.35 – 17.55 Coffee break
- 17.55 – 18.40 **Lecture 6.** *Denis Vyalikh* “The dual nature of 4f electrons in rare-earth intermetallics: ARPES view”
- 18.45 – 19.30

Wednesday, September 25th

- 9.00 – 9.45 **Lecture 7.** *Xi Chen* “Topological insulators and beyond”
- 9.50 – 10.35
- 10.35 – 10.55 Coffee break
- 10.55 – 11.55 **Lecture 8.** *Sergei N. Molotkov* “Symmetry and topological analysis of surface states”

- 11.55 – 16.00 Lunch
- 16.00 – 16.30 **Invited talk 2.** *Lada Yashina* “Chemistry of discharge and recharge of Li-air battery: operando XPS studies”
- 16.30 – 17.15 **Oral students’ session.**
- 17.15 – 17.35 Coffee break
- 17.35 – 19.00 **Poster students’ session.**

Thursday, September 26th

Excursions

Friday, September 27th

- 9.00 – 9.45 **Lecture 9.** *Christophe Brun* “Scanning tunneling spectroscopy of confined
- 9.50 – 10.35 superconductors”
- 10.35 – 10.55 Coffee break
- 10.55 – 11.25 **Invited talk 3.** *Boris Andryushechkin* “Surface chlorides on metals”
- 11.25 – 11.45 **Sponsor presentation 3.** SPECS
- 11.45 – 16.00 Lunch
- 16.00 – 16.30 **Invited talk 4.** *Oleg Tereshchenko* “Spin filter effect in ferromagnetic/semiconductor structures: towards an optical spin-detection with spatial resolution”
- 16.30 – 17.00 **Invited talk 5.** *Dmitry Usachev* “Interface architecture and electronic structure of novel graphene-based systems”
- 17.00 – 17.20 Coffee break
- 17.20 – 17.50 **Invited talk 6.** *Artem Rybkin* “Rashba Splitting in Monolayers of Au, Cu on a W(110) Substrate”
- 17.50 – 18.10 **Sponsor presentation 4.** Bruker
- 19.30 – 22.00 **Conference dinner**

Saturday, September 28th

- 9.00 – 10.00 **Lecture 10.** *Sergei N. Molotkov* “Quantum cryptography protocols: theory and experiment implementation”
- 10.00 – 10.20 Coffee break
- 10.20 – 11.20 **Lecture 11.** *Konstantin S. Kravtsov* “Experimental realizations of free-space quantum key distribution systems”
- 11.20 – 11.40 **Sponsor presentation 5.** Sigma Scan
- 11.40 – 12.10 **Awarding the participants of the best presentations and Closing remarks**

Sunday, September 29th

Excursion