

TUMIEE Meeting

Working Group Meeting
28 & 29 April 2022
Prague, Czech Republic

PROGRAMME

Thursday, 28 April 2022	
9:00 – 9:30	Registration
9:30 – 9:40	Opening session
9:40 – 10:00	Ultrashort pulsed laser induced complex surface structures generated by tailoring the melt hydrodynamics George Tsibidis, IELS-FORTH (Greece)
10:00 – 10:20	Laser ablation dynamics of irradiated liquid tin target and plasma extreme-ultraviolet emission features Serge Zakharov, EATS-Orsay (France)
10:20 – 10:40	Measuring and modelling ultrashort-pulse laser excitation of dielectric materials Peter Balling, Aarhus University (Denmark)
10:40 – 11:00	Wavelength scaling from ultraviolet to mid-infrared in femtosecond laser modification of dielectrics and semiconductors Mario García-Lechuga, Instituto de Óptica, IO-CSIC (Spain)
11:00 – 11:40	Coffee break
11:40 – 12:00	Role of electronic processes for X-ray induced ultrafast demagnetization within magnetic multilayer systems Beata Ziaja, CELF-DESY (Germany)
12:00 – 12:20	Electron-ion coupling and nonthermal effects in metals at high electronic temperatures Nikita Medvedev, Institute of Physics, CAS (Czech Republic)
12:20 – 12:40	Pressure in underwater spark inferred from H-alpha line broadening Karel Kolacek, Institute of Plasma Physics, CAS (Czech Republic)
12:40 – 13:00	Numerical modeling on the optical shaping of gas-jet targets for particle acceleration at the near-critical density regime Ioannis Tazes, Hellenic Mediterranean University (Greece)
13:00 – 14:30	Lunch
14:30 – 14:50	Simulations of Au nanoparticle shape transformation in silica by swift heavy ions Aleksi Leino, University of Helsinki (Finland)
14:50 – 15:10	Detection of novel radiation-induced structural defects in heavily irradiated magnesium aluminate and corundum crystals Aleksandr Lushchik, University of Tartu (Estonia)
15:10 – 15:30	An excitonic model for the electron-hole plasma relaxation in proton-irradiated insulators Lorenzo Stella, Queen's University Belfast (United Kingdom)
15:30 – 15:50	Comparative Analysis of Kinetics of Diffusion-Controlled Defect Annealing in Irradiated Ionic Crystals MgO and MgF₂ Anatoli Popov, University of Latvia (Latvia)
15:50 – 17:30	Poster session (w/ refreshments)
19:30	Networking dinner (restaurant: TBD)

Friday, 29 April 2022

9:30 – 9:50	Radiobiology activities in progress at CMAM Gastón García, CMAM, Universidad Autónoma de Madrid (Spain)
9:50 – 10:10	Microadditive manufacturing using LIFT. Current challenges in biomedicine and electronics Carlos Molpeceres, Universidad Politécnica de Madrid (Spain)
10:10 – 10:30	Laser surface texturing of Ti-based multilayers for biomedical application Suzana Petrovic, Vinča Institute of Nuclear Sciences, University of Belgrade (Serbia)
10:30 – 11:10	Coffee break
11:10 – 11:30	Upconversion lanthanide-doped nanoparticle kinetics studied by time modulated excitation Lucía Labrador Paez, Complutense University of Madrid (Spain)
11:30 – 11:50	NS super-excited molecular states in the collision of electrons with NS+ cation Felix Iacob, West University of Timisoara (Romania)
11:50 – 12:10	Stark Broadening of spectral lines of Ionised Zinc Milan S. Dimitrijević, Astronomical Observatory (Serbia)
12:10 – 13:30	Round table & concluding remarks

POSTER SESSION (Thursday, 15:50 – 17:30)

P1	Reactive collisions between electrons and molecular cations at extreme energy Nicolina Pop, Politehnica University Timișoara (Romania)
P2	Laser induced breakdown in solids - possibilities and limitations Violeta Petrović, University of Kragujevac (Serbia)
P3	Analysis of space-temporal dynamics of laser-induced plasma absorption coefficients in human tissue samples Hristina Delibašić Marković, University of Kragujevac (Serbia)
P4	Ultra-short selective ablation of nano-layer thin metallic films Biljana Gaković, Vinča Institute of Nuclear Sciences (Serbia)
P5	Calculated properties of the self-trapped exciton in diamond from DFT calculations Alexander Platonenko, University of Latvia (Latvia)
P6	Surface investigation of the Ni and Ti based alloys after the femtosecond laser irradiation in the controlled nitrogen atmosphere Dubravka Milovanovic, Institute of General and Physical Chemistry, Belgrade (Serbia)
P7	Analysis of Evolution of Free-Volume Positron Trapping Defects in the BaGa₂O₄ Ceramics Doped with Eu³⁺ Ions Halyna Klym, Lviv Polytechnic National University (Ukraine)
P8	Simulation of Terahertz Radiation Generation by Femtosecond Pulses Propagating in Nanocomposites with Semiconductor Quantum Dots Olga Fedotova, SPMRC of NASB (Belarus)
P9	Cross-sections and rate coefficients for some collisional processes involving Rydberg atoms Vladimir Sreckovic, University of Belgrade (Serbia)
P10	UV Laser Induced Electronic Defects Change Investigation on MABi₃ Perovskite Solar Cells Gökhan Yilmaz, Burdur Mehmet Akif Ersoy University (Turkey)
P11	Preliminary results on the divergence of Ar-gas generated high harmonic beam using chirped femtosecond laser pulses Emmanouil Kaniolakis-Kaloudis, IPPL, Hellenic Mediterranean University (Greece)
P12	Laser surface texturing of Ti-based multilayers for biomedical application Suzana Petrovic, Vinča Institute of Nuclear Sciences, University of Belgrade (Serbia)



Meeting venue:
Institute of Plasma Physics of the CAS
U Slovanky 2525/1a
182 00 Prague 8 - Libeň