Funded by the Horizon 2020 Framework Programme of the European Union

TUMIEE Final Meeting

20 February 2023
Belgrade, Serbia

AGENDA

Monday, 20 February 2023	
8:30 – 9:00	**Registration**
9:00 – 9:10	**Opening session**
9:10 – 10:30	**SESSION 1**
9:10-9:30	**Talk 1** Nektarios Papadogiannis, Hellenic Mediterranean University (Greece) **High intensity positively chirped laser pulses accelerate efficiently electrons in the relativistic regime**
9:30-9:50	**Talk 2** Carlos Molpeceres, Universidad Politécnica de Madrid (Spain) **Laser Nano and Microprocessing, Quo Vadis?**
9:50-10:10	**Talk 3** Biljana Gaković, Vinča Institute of Nuclear Sciences (Serbia) **Ultrafast laser modification of Ni/Ti nano layer thin film: selective ablation and laser induced periodical surface structure**
10:10-10:30	**Talk 4** Henryk Fiedorowicz, Military University of Technology (Poland) **Soft X-ray emission from laser-irradiated gas puff targets containing micron-sized particles**
10:30 – 11:00	Coffee break
11:00 – 12:40	**SESSION 2**
11:00-11:20	**Talk 5** Roberto Iglesias, University of Oviedo (Spain) **Development of a predictive simulation toolbox for advanced materials performance under extreme conditions: from electronic excitations to the atomistic and continuum modelling of surface damage**
11:20-11:40	**Talk 6** Anton Husakou, Max Born Institute (Germany) **Tunable Near-UV Pulses by a Transient Plasmonic Resonance**
11:40-12:00	**Talk 7** Daniel Muñoz-Santiburcio, Universidad Politécnica de Madrid (Spain) **Proton irradiation of DNA in physiological conditions by ab initio simulations**
12:00-12:20	**Talk 8** Victor Tkachenko, CFEL-DESY (Germany) **Modelling of ultrafast X-ray induced magnetization dynamics in magnetic systems**

Institute of General and Physical Chemistry

Meeting venue:
Serbian Academy of Sciences and Arts
Hall 2, 1st floor
Knez Mihailova 35, Belgrade

12:20-12:40	**Talk 9** George Tsibidis, IESL-FORTH (Greece) **Ionisation dynamics, damage conditions and surface patterning in fused silica irradiated with Mid-Infrared femtosecond pulses**
12:40 – 14:00	Lunch
14:00 – 16:00	**SESSION 3**
14:00-14:20	**Talk 10** Tzveta Apostolova, Bulgarian Academy of Sciences (Bulgaria) **Non-linear response and high harmonic generation in bulk crystals**
14:20-14:40	**Talk 11** Gintautas Tamulaitis, Vilnius University (Lithuania) **Nonlinear optical spectroscopy for studying the transport of radiation-generated carriers in scintillators**
14:40-15:00	**Talk 12** Boyan Obreshkov, Institute for Nuclear Research and Nuclear Energy (Bulgaria) **Non-linear optical response of zinc oxide**
15:00-15:20	**Talk 13** Stella Maragkaki, IESL-FORTH (Greece) **Impact of pre-patterned structures on features of laser-induced periodic surface structures**
15:20-15:40	**Talk 14** Magdalena Christova, Technical University of Sofia (Bulgaria) **Stark widths of Lu II spectral lines**
15:40-16:00	**Talk 15** Konstantinos Kaleris, Hellenic Mediterranean University (Greece) **Laser-plasma sound sources in ambient air**
16:00 – 16:30	**Round table & concluding remarks**
16:30 – 18:00	**Poster session (w/ refreshments)**
20:00	**Dinner at the restaurant "Via del Gusto" (address: Kneza Mihaila, 48)**

POSTER SESSION

P1	**Accumulation of nano-size defects in MgAl2O4 exposed to swift ions** Aleksandr Lushchik University of Tartu (Estonia)
P2	**Data for electron-impact processes involving alkali and hydrogen molecular ions: influence on the atom excited states population** Vladimir Sreckovic University of Belgrade (Serbia)

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P3	**Database and web service for collisional excitation & ionization processes of laboratory and astrophysical importance** Veljko Vujčić Astronomical Observatory (Serbia)
P4	**Models of Electron Scattering and Impact Ionization for Electron Flux Transport in a Weakly Ionized Plasma** Serge Zakharov EATS (France)
P5	**Electron scattering on H^+_2 and HD^+ molecular cations in the Early Universe: Dissociative recombination and ro-vibrational transitions** Nicolina Pop Politehnica University Timisoara (Romania)
P6	**Stark broadening of Al IV spectral lines** Milan Dimitrijević Astronomical Observatory Belgrade (Serbia)
P7	**Multiscale modelling of biomaterials: applications to dosimetry aspects in brachytherapy** Ángeles Cerdeira University of Oviedo (Spain)
P8	**High-energy heavy ion irradiation of bilayer and trilayer graphene** Marko Karlušić Ruđer Bošković Institute (Croatia)
P9	**Coulomb corrected nonadiabatic instantaneous ionization rate and the electron trajectory in an elliptically polarized laser field** Violeta Petrovic University of Kragujevac (Serbia)
P10	**Calculations of the excited states using Delta-SCF method** Alexander Platonenko University of Latvia (Latvia)
P11	**Optimization of the irradiation process and modification of the Nimonic 263 surface by a picosecond laser in different environmental conditions** Boris Rajčić Institute of General and Physical Chemistry (Serbia)
P12	**Highly-excited double Rydberg states of electron-molecular cation impact** Felix Iacob West University of Timisoara (Romania)
P13	**Luminescence and TSL study of ScF3 single crystals under UV-VUV and electron beam excitation** Līga Klēbaha University of Latvia (Latvia)
P14	**Study of underwater discharge initiated by a high-voltage pulse** Alexandr Frolov Institute of Plasma Physics of the Czech Academy of Sciences (Czech Republic)

P15	**Molecular dynamics studies on nitrogen-vacancy center formation in diamond using swift heavy ions** Aleksi Leino University of Helsinki (Finland)
P16	**Local thermal non-equilibrium two-temperature model for numerical investigation of laser-ocular media interaction** Hristina Delibašić-Marković University of Kragujevac (Serbia)
P17	**Formation of well-ordered surface morphologies on multilayer Ti/Nb and Ti/Mo multilayers by picosecond laser irradiation** Suzana Petrović Vinča Institute of Nuclear Sciences (Serbia)
P18	**1D/3D modelling of cavity-free N_2 and N_2^+ lasing** Santiago López Universidad Politécnica de Madrid (Spain)
P19	**The problem of femtosecond pulse localization in an ensemble of semiconductor quantum dots** Olga Fedotova Scientific-Practical Materials Research Centre (Belarus)
P20	**The role of zirconium and copper sub-layer in MRC-5 cell integration on femtosecond laser-processed Ti thin films** Nevena Božinović Vinča Institute of Nuclear Sciences (Serbia)
P21	**Fabrication of HSFL and LSFL ripples on Si and Ni surfaces** Christina Siogka IELS-FORTH (Greece)