

# SPIG 2022 PROGRAMME

Belgrade, Serbia, September 05 – 09, 2022

All indicated times are given in the Central European Summer Time (CEST) zone.

<b>Monday 5<sup>th</sup> September 2022</b>	
<b>SPIG 2022 (day 1)</b>	
<b>XiBiGP Workshop</b>	
09:00-09:30	<i>Registration</i>
09:30-09:40	<b>Hall B: Opening and Introduction</b> Aleksandar Milosavljević and Christophe Nicolas (SOLEIL)
09:40-10:00	<i>European Synchrotron and FEL User Organisation: Current Challenges and Prospects (COST Actions)</i> <b>Bratislav Marinković</b> , Institute of Physics Belgrade, Serbia [ <b>Regular</b> ]
	<i>Session 1, Hall B, Chair: Aleksandar Milosavljević</i>
10:00-10:20	<i>Ultrafast dynamics of photo-excited molecules at FERMI Free Electron Laser</i> <b>Michele di Fraia</b> , Elettra-Sincrotrone Trieste, Italy [ <b>Virtual</b> ]
10:20-10:40	<i>UV-induced processes in DNA</i> <b>Lara Martínez-Fernandez</b> , Universidad Autónoma de Madrid, Spain [ <b>Virtual</b> ]
10:40-11:00	<i>The 'LEGO bricks' of life: a gas-phase study of dipeptides</i> <b>Laura Carlini</b> , CNR-ISM, Italy [ <b>Virtual</b> ]
11:00-11:20	<i>Photofragmentation of the radiation therapy enhancers: can we make better ones?</i> <b>Marta Berholts</b> , Tartu University, Estonia [ <b>Virtual</b> ]
<b>11:20-12:00</b>	<i>Coffee break</i>
	<i>Session 2, Hall B, Chair: Sergio Diaz-Tendero</i>
12:00-12:30	<i>Plasmon-induced chemical reactions on noble metal nanoparticles studied by synchrotron XPS and surface-enhanced Raman scattering</i> <b>Ilko Bald</b> , University of Potsdam, Germany [ <b>Virtual</b> ]
12:30-12:50	<i>Valence band structure of isolated biomolecule-functionalized gold nanoparticles</i> <b>Jelena Pajović</b> , Faculty of Physics, University of Belgrade, Serbia [ <b>Regular</b> ]
12:50-13:10	<i>Determination of the Adenine-Thymine binding energy</i> <b>Sebastian Hartweg</b> , Synchrotron SOLEIL, France [ <b>Virtual</b> ]
13:10-13:30	<i>In the search of peptide prebiotic building blocks: Studying the fragmentation of photoionized Diketopiperazines</i> <b>Dario Barreiro-Lage</b> , Universidad Autónoma de Madrid, Spain [ <b>Regular</b> ]
<b>13:30-15:30</b>	<i>Lunch break</i>
	<i>Session 3, Hall B, Chair: Lucas Schwob</i>
15:30-16:00	<i>VUV and soft X-ray interactions with trapped biomolecular ions</i> <b>Thomas Schlathölder</b> , University of Groningen, Netherlands [ <b>TBC</b> ]
16:00-16:20	<i>Covalent bond formation within clusters: a pathway for the synthesis of complex molecules in the interstellar medium</i> <b>Yoni Toker</b> , Bar Ilan University, Israel [ <b>Regular</b> ]
16:20-16:40	<i>Isolated metalloporphyrins: Revealing their electronic structure and orbital-specific deexcitation processes experimentally</i> <b>Kaja Schubert</b> , DESY, Germany [ <b>Virtual</b> ]
16:40-17:00	<i>X-ray absorption spectroscopy and mass spectrometry of protonated ATP molecule</i> <b>Aleksandar Milosavljevic</b> , Synchrotron SOLEIL, France [ <b>Regular</b> ]
<b>17:00-17:30</b>	<i>Coffee break</i>
	<i>Session 4, Hall B, Chair: Christophe Nicolas</i>
17:30-18:00	<i>An overview on the recent liquid-jet PES developments</i> <b>Bernd Winter</b> , Fritz Haber Institute of the Max Planck Society, Germany [ <b>Virtual</b> ]

18:00-18:20	<i>Surface propensity of small organic biomolecules in vapour-water interface by XPS</i> <b>Alexandra Mocellin</b> , Institute of Physics, Brasil [Virtual]
18:20-18:40	<i>Electronic structure and solvation effects from core and valence photoelectron spectroscopy of serum albumin</i> <b>Jean Philippe Renault</b> , University Paris Saclay, France [Virtual]
18:40-19:00	<i>First (e,e) coincidence measurements at PLEIADES beamline on solvated benzoate in water using a new magnetic bottle time-of-flight spectrometer</i> <b>Jerome Palaudoux</b> , Sorbonne Université, France [Virtual]
18:00-20:00	<i>Welcome cocktail (Club of SASA)</i>

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<b>Tuesday 6th September 2022</b>		
<b>SPIG 2022 (day 2)</b>		
<i>PL – Plenary lecture: 35+10 min</i>	<i>TL – Topical lecture: 25+5 min</i>	<i>PR – Progress Report: 15+5 min</i>
08:45-09:00	<b>Opening, Chairs:</b> V. Srećković, D. Ilić, B. Obradović, J. Cvetić	
	<b>Plenary Session 1, Hall A, Chair:</b> V. Srećković & D. Ilić	
09:00-09:45	<b>Sven Thorwirth</b> (Germany), Action-spectroscopic studies of transient carbon-rich molecular ions [Regular]	
09:45-10:30	<b>Sergio Diaz-Tendero</b> (Spain), Ultrafast dynamics of ionized molecules and molecular clusters in the gas phase [Regular]	
10:30-11:00	<b>Coffee Break &amp; Chat Room</b>	
	<b>Plenary Session 2, Hall A, Chair:</b> B. Obradović	
11:00-11:45	<b>Ryo Ono</b> (Japan), Measurement and simulation of atmospheric-pressure streamer discharge [Virtual]	
11:45-12:30	<b>Bozena Czerny</b> (Poland), Dusty plasma in active galactic nuclei [Virtual]	
12:30-14:30	<b>Lunch Break</b>	
	<b>Hall A - Parallel Session:</b> Chair: N. Simonović	<b>Hall B - Parallel Session</b> Chair: D. Borka
14:30-15:00	<b>Stojan Madzunkov</b> (USA), Utilization of Electric Dipole Fields in protection from GCR and SEPs [Regular]	<b>Jiri Limpouch</b> (Czech Republic), High-power laser interactions with low density porous materials and their applications [Virtual]
15:00-15:30	<b>Gregory Boyle</b> (Australia), Thermalisation time of electron swarms in Noble gases for uniform electric fields [Virtual]	<b>Minna Patanen</b> (Finland), Electron-ion coincidence experiments with electron and photon ionization [Virtual]
15:30-16:00	<b>Mikhail Pinchuk</b> (Russia), Control of guided streamer propagation and interaction with substrate in helium atmospheric pressure plasma jet [Regular]	<b>Violeta N. Nikolic</b> (Serbia), Spectroscopic investigation of the influence of NO <sub>3</sub> <sup>-</sup> anions on the crystallization of the SiO <sub>2</sub> matrix [15:30-15:50] [Regular]
16:00-16:30	<b>Aranka Derzsi</b> (Hungary), Surface processes in low-pressure capacitively coupled plasmas [Regular]	<b>Dejan Dojić</b> (Serbia), Measurements of continuous optical spectrum during nanosecond laser pulse [15:50-16:10] [Regular]
		<b>Milivoje Hadžijojić</b> (Serbia), Study of two dimensional crystals by rainbow scattering effect [16:10-16:30] [Regular]
16:30-17:00	<b>Coffee Break &amp; Chat Room</b>	

	<b>Hall A - Parallel Session</b> Chair: <i>S. Tošić</i>	<b>Hall B - Parallel Session</b> Chair: <i>M. Trtica</i>
17:00-17:30	<b>Vasco Guerra</b> (Portugal), Coupled kinetics in CO <sub>2</sub> -N <sub>2</sub> plasmas [ <b>Regular</b> ]	<b>Nikola Starčević</b> (Serbia), Ion-crystal rainbow interaction potential in channeling [17:00-17:20] [ <b>Regular</b> ]
17:30-18:00	<b>Teodora Velcheva Kirova</b> (Latvia), Numerical investigations of the impact of the magnetic field of radiation on amino acids [ <b>Regular</b> ]	<b>Jovan V. Ciganović</b> (Serbia), Action of pulsed lasers on titanium target: surface effects [17:20-17:40] [ <b>Regular</b> ]
18:00-18:30	<b>Lucas Schwob</b> (Germany), X-ray action spectroscopy of gas-phase biomolecular ions [ <b>Virtual</b> ]	<b>Dušan Popović</b> (Serbia), Picosecond pulsed laser ablation of silicon single crystal [17:40-18:00] [ <b>Virtual</b> ]
18:30-20:00	<b>Poster session (1)</b> - Poster presentation – <b>Club of SASA</b> (Chair: <i>D. Borka</i> )	

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<b>Wednesday 7th September</b> <b>SPIG 2022 (day 3)</b>		
<b>PL</b> – Plenary lecture: 35+10 min	<b>TL</b> – Topical lecture: 25+5 min	<b>PR</b> – Progress Report: 15+5 min
	<b>Plenary Session 3, Hall A, Chair: D. Marić</b>	
09:00-09:45	<b>Darryl Jones</b> (Australia), Electron spectroscopies for probing electronic structure and collision dynamics [ <b>Virtual</b> ]	
09:45-10:30	<b>James Sullivan</b> (Australia), Experiments with positrons - from fundamental to applied science [ <b>Virtual</b> ]	
<b>10:30-11:00</b>	<b>Coffee Break &amp; Chat Room</b>	
	<b>Hall A - Parallel Session</b> Chair: <i>G. Poparić</i>	<b>Hall B - Parallel Session</b> Chair: <i>V. Srečković</i>
11:00-11:30	<b>Nicolina Pop</b> (Romania), Dissociative recombination and excitation of molecular cations by electron-impact in cold plasmas: Application to H <sup>2+</sup> , BeH <sup>+</sup> and their isotopomers [ <b>Regular</b> ]	<b>Stéphane Béchu</b> (France), Investigation of the ro-vibrational levels of H <sub>2</sub> /D <sub>2</sub> molecules by VUV-absorption spectroscopy for the production of H-/D- negative ions for fusion application [ <b>Virtual</b> ]
11:30-12:00	<b>Saša Dujko</b> (Serbia), Electron transport, transient plasmas and high-energy phenomena in planetary atmospheres [ <b>Regular</b> ]	<b>Joel Rosato</b> (France), Line shape modeling for magnetic fusion and astrophysical plasmas: an overview of recent result [ <b>Virtual</b> ]
12:00-12:20	<b>Milan Ignjatovic</b> (Serbia), The influence of corona discharge on the lightning surge propagation along the transmission lines [ <b>Regular</b> ]	<b>N. N. Bezuglov</b> (Russia), Analysis of adiabatic processes in multilevel n-pod quantum systems from the perspective of riemannian geometry [ <b>Virtual</b> ]
<b>12:30-14:30</b>	<b>Lunch Break /SPIG Committee meeting at 13h</b>	

	<b>Hall A - Parallel Session</b> Chair: V. Milosavljević	<b>Hall B - Parallel Session</b> Chair: L. Č. Popović
14:30-15:00	<b>Djordje Spasojević</b> (Serbia), On the application of iterative kinetic model for diagnostics of abnormal glow discharges in noble gases <b>[Regular]</b>	<b>Teresa Belmonte Sainz-Ezquerria</b> (Spain), What can plasma spectroscopy do for astronomers? Measuring atomic parameters of astrophysical importance <b>[Virtual]</b>
15:00-15:20	<b>Danilo Delibasic</b> (Serbia), Relative importance of the electron continuum intermediate state in single-electron capture into any state of fast protons from helium-like atomic systems. <b>[Regular]</b>	<b>Antonios Antoniou</b> (Greece), Describing the Mathematical Methods for Calculating Basic Physical Parameters of the Gaussian-Rotational (Gr) Model <b>[Virtual]</b>
15:20-15:40	<b>Leo Sala</b> (Czech Republic), Interaction of ionizing radiation with DNA nanostructures <b>[Regular]</b>	<b>Thomas Salomon</b> (Germany), Recent Progress on Action Spectroscopy of loosely bound Hydrogen-Helium complexes <b>[Regular]</b>
<b>16:00</b>	<b>Mini excursion – Belgrade walking tour</b>	

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<b>Thursday 8th September 2022</b>		
<b>SPIG 2022 (day 4)</b>		
<b>PL – Plenary lecture: 35+10 min</b>	<b>TL – Topical lecture: 25+5 min</b>	<b>PR – Progress Report: 15+5 min</b>
	<b>Plenary Session 4, Hall A, Chair: M. Trtica</b>	
09:00-09:45	<b>Jorn Bonse</b> (Germany), Laser-induced periodic surface structures, mechanisms, applications, and unsolved problems <b>[Virtual]</b>	
09:45-10:30	<b>Marie-Lise Dubernet</b> (France), Towards a Global Network for Laboratory Astrophysics Activities and Data <b>[Virtual]</b>	
<b>10:30-11:00</b>	<b>Coffee Break &amp; Chat Room</b>	
	<b>Plenary Session 3, Hall A, Chair: V. Guerra</b>	
11:00-11:45	<b>Lawrence Overzet</b> (USA), Measurements of RF plasma re-ignition: RF-IV and PROES <b>[Virtual]</b>	
<b>11:45-14:00</b>	<b>Lunch Break</b>	
	<b>Hall A - Parallel Session</b> Chair: M. Škorić	<b>Hall B - Parallel Session</b> Chair: J. Cvetić
14:00-14:30	<b>Nathan Garland</b> (Australia), When fusion plasmas get cool: A need for more atomic physics in classical fusion models <b>[TBC]</b>	<b>Pavel Dvorak</b> (Czech Republic), Higher harmonic frequencies of discharge voltage and current in capacitively coupled discharges <b>[Regular]</b>
14:30-15:00	<b>Mohammed Koubiti</b> (France), Application of machine-learning to spectroscopic line emission by hydrogen isotopes in fusion devices for isotopic determination and prediction <b>[Virtual]</b>	<b>Milica Vasiljević</b> (Serbia), Determination of the electric field strength in glow discharges using argon spectral lines. <b>[Regular]</b> [14:30-14:50]

15:00-15:40	<b>Coffee Break &amp; Chat Room</b>	
	<b>Hall A - Parallel Session</b> Chair: V. Milosavljević	<b>Hall B - Parallel Session</b> Chair: D. Ilić
15:40-16:00	<b>Amit Kumar</b> (Serbia), Design, development and characterization of atmospheric plasma system for wastewater treatment [ <b>Regular</b> ]	<b>Viktor Radovic</b> (Serbia), Development of a time-domain pipeline for detecting binary supermassive black holes in the upcoming Legacy Survey of Space and Time (LSST) [ <b>Virtual</b> ]
16:00-16:20	<b>Nenad Selaković</b> (Serbia), Mass spectrometry of plasma jet and application of electrical discharges operating at atmospheric pressure in biomedicine [ <b>Regular</b> ]	<b>Swayamtrupta Panda</b> (Brasil), Modelling continuum anisotropy and super Eddington accreting quasar spectra [ <b>Virtual</b> ]
16:20-17:00	<b>Coffee Break &amp; Chat Room</b>	<b>Milena Jovanović</b> (Serbia), [16:20 – 16:40] Matter distribution in nearby galaxies [ <b>Virtual</b> ]
	<b>Hall A - Parallel Session</b> Chair: I. Savić	<b>Hall B - Parallel Session</b> Chair: I. Mančev
17:00-17:20 CET	<b>Marija Puač</b> (Serbia), Modeling of radio frequency breakdown by Monte Carlo technique [ <b>Regular</b> ]	<b>Smita Omkarnath Ganguly</b> (Sweden), Fragmentation of core-ionized adamantane molecule [ <b>Regular</b> ]
17:20-17:40 CET	<b>Madhusree Roy Chowdhury</b> (France), VUV Photoionization and Fragmentation of cyano-PAHs [ <b>Regular</b> ]	<b>Dale Muccignat</b> (Australia), Simulating the feasibility of using liquid micro-jets for determining electron-liquid scattering cross-sections [ <b>Virtual</b> ]
17:40-19:00	<b>Poster session (2)</b> - Virtual poster presentations - <b>Hall B</b> (Chair: N. Cvetanović) [ <b>*Optional: 5 min presentation per poster</b> ]	
20:30 -	<b>Conference dinner and Closing</b>	

<b>Friday 9th September 2022</b>	
<b>SPIG 2022 (day 5)</b>	
10:00-17:00	<b>Excursions (optional, info at registration desk)</b>
17:00	<b>Departure</b>

## LIST OF POSTERS

No	Session	Title	Authors
1.	1.1.	Total cross section measurements for electron scattering on methyl formate ( $\text{HCOOCH}_3$ ) molecule: methylation effect <b>[Virtual]</b>	Natalia Tańska, Kuba Wójcik, Sylwia Dylnicka, Elżbieta Ptasińska-Denga, Czesław Szmytkowski and Paweł Możejko
2.	1.1.	Dissociation of $\text{N}_2$ by electron impact in RF electric field	V. Stanković, M. Ristić, R. Ranković, M. Aoneas, M. Vojnović and G. B. Poparić
3.	1.1.	Rate coefficients for $\text{O}_3^+$ dissociation to $\text{O}^+$ and $\text{O}_2^+$ by electron impact	M. M. Vojnović, M. M. Ristić and D. S. Belić
4.	1.1.	Photoelectron energy spectra in sequential two-photon ionization of hydrogen by gaussian and half-gaussian laser pulses	N. S. Simonović, D. B. Popović, A. Bunjac
5.	1.2.	Single-electron capture from He by fast alpha particles	Nenad Milojević, Danilo Delibašić Ivan Mančev
6.	1.3.	Reduced mobility of $\text{H}^+$ ions in n-butanol gas <b>[Virtual]</b>	Željka Nikitović and Zoran Raspopović
7.	1.3.	Excitation of $^1\Sigma_u^+$ and $^1\Pi_u$ states and ionization of $\text{CO}_2$ in DC electric field	Violeta V. Stanković, Mirjana M. Vojnović, Miroslav M. Ristić, Sava M.D. Galijaš and Goran B. Poparić
8.	1.3.	Formation and propagation of streamers in $\text{CF}_3\text{I-SF}_6$ gas mixtures	J. Atić, D. Bošnjaković, I. Simonović, Z.Lj. Petrović and S. Dujko
9.	1.3.	Electron transport coefficients in CO: Scanning drift tube measurements and kinetic computations	S. Dujko, D. Bošnjaković, M. Vass, I. Korolov, P. Hartmann, N. Pinhao, D. Loffhagen and Z. Donko
10.	1.3.	Third-order transport coefficients for electrons in $\text{C}_3\text{F}_8$	I. Simonović, D. Bošnjaković, Z.Lj. Petrović and S. Dujko
11.	2.1.	The time-symmetric description of electron exchange in ion-ion collision	S. M. D. Galijaš, V. M. Milosavljević and G. B. Poparić
12.	2.1.	Analytical expression for stopping force acting on a slow charged particle moving parallel to a thick graphene-sapphire-graphene structure	Ana Kalinić, Ivan Radović, Lazar Karbunar, Vito Despoja and Zoran L. Mišković
13.	2.1.	Bohmian dynamics of positrons channeled through a chiral carbon nanotube	M. Ćosić, M. Hadžijojić, and N. Nešković

14.	2.1.	Study of graphene by rainbow scattering effect	M. Hadžijojić and M. Ćosić
15.	2.1.	The influence of the ion-target parameters on the size of the surface nanohillocks created by an impact of highly charged ions	N. N. Nedeljković, M. D. Majkić, M. A. Mirković, I. Stabrawa, D. Banaš
16.	2.1.	Effect of the ionic type on the shape of the nanostructures created by an impact of slow highly charged ions on gold surface	M. D. Majkić, N. N. Nedeljković M. A. Mirković,
17.	2.2.	Influence of carbon ions of different multiplicity on regimes of promising laser technologies for the deposition of diamond-like carbon nanocoatings <b>[Virtual]</b>	V.K.Goncharov, G.A.Gusakov, M.V.Puzyrev
18.	2.3.	Elemental analysis of austenitic steel by calibration-free laser-induced breakdown spectroscopy (CF-LIBS)	I. Traparić, M. Jovanović, M. Kuzmanović, M. Ivković
19.	2.3.	ODS+Hf and AISI 316L steel surface variations at high laser intensity, 1013 W/cm <sup>2</sup> , in air and vacuum: comparative study	M. Trtica, J. Stasic, X. Chen and J. Limpouch
20.	2.3.	Silicon spalling destruction and ablation in air under bichromatic laser radiation	A.N. Chumakov, V.V. Luchkouski and I.S. Nikonchuk
21.	2.3.	Features of silicon ablation in air under the influence of Nd:YAG laser harmonics	A.N. Chumakov, V.V. Lychkovsky, I.S. Nikonchuk
22.	2.3.	Investigation of properties of yttrium vanadate YVO <sub>4</sub> films	N.A. Bosak, A.N. Chumakov, L.V. Baran, V.V. Malyutina-Bronskaya, T.F. Raichonok, A.A. Ivanov, V.V. Kiris, E.M. Dyatlova, A.A. Shevchenok, A.V. Buka, A.S. Kuzmitskaya
23.	2.3.	Treatment of steel 16MnCr5 and steel 42CrMo4 by plasma flow generated in magnetoplasma compressor <b>[Virtual]</b>	Nora Trklja Boca, Žarko Z. Mišković, Radivoje M. Mitrović, Bratislav M. Obradović, Milorad M. Kuraica
24.	2.3.	Combining plasma-assisted synthesis of metal oxide nanoparticles with thin films deposition	Natalie Tarasenko, Vladislav Kornev, Alena Nevar, Mikhail Nedel'ko, Anton Radomtsev and Nikolai Tarasenko



25.	2.3.	Perspective on the use of nanoparticles to improve the tea CO <sub>2</sub> based LIBS analytical performances: copper nanoparticles for NELIBS analysis of polypropylene	S. Živković, J. Petrović, M. Momčilović, M. Radenković, N. Krstulović, J. Car, D. Palasti, F. Casian Plaza and G. Galbács
26.	2.3.	Analytical prediction and numerical analysis of plasma mediated ablation of skin tissue samples with nanosecond-to-femtosecond laser pulses <b>[Virtual]</b>	H. Delibašić, Marković, V. Petrović and I. Petrović
27.	2.3.	Pulsed laser assisted fabrication of Co-doped ZnO nanocrystalline layers on a glass substrate	Natalie Tarasenko, Vladislav Kornev, Svetlana Pashayan, and Nikolai Tarasenko
28.	3.1.	The gas temperature diagnostics by means of AlO (B <sup>2</sup> Σ <sup>+</sup> -X <sup>2</sup> Σ <sup>+</sup> ) molecular band system from the upgraded atmospheric pressure pulsed discharge source in argon	Jovica Jovović, Gordana Lj. Majstorović
29.	3.1.	High-resolution spectroscopy of astrophysically relevant molecular ions	O. Asvany, S. Thorwirth, P. C. Schmid, T. Salomon, and S. Schlemmer
30.	3.1.	Polarization spectroscopy of neon lines for electric field distribution measurement in the cathode sheath of a Grimm-type glow discharge	N. V. Ivanović, N. V. Nedić, I. R. Videnović and D. Spasojević
31.	3.1.	Analysis of printed circuit board LIBS data using deep learning	M.S. Rabasovic, B.P. Marinkovic, D. Sevic
32.	3.1.	Spectroscopic determination of the degree of dissociation of hydrogen in the glow discharge	M. M. Vasiljević, G. Lj. Majstorović I. R. Videnović and D. Spasojević
33.	3.1.	Spectroscopic characterization of laser-induced plasma on doped tungsten	Biljana Stankov, Marijana R. Gavrilović Božović, Jelena Savović and Milivoje Ivković
34.	3.1.	Features of the HeI 492.2 nm line profile registered at diagnostics of DC and streamer discharges	L.V. Simonchik and A.V. Kazak
35.	3.1.	Temperature estimation in the early stage of laser induced plasma formation relying on black body radiation	Milos Skocic, Nikodin Nedic, Dejan Dojic, Luka Rajacic, Srdjan Bukvic
36.	3.1.	Formation and heating of silicon plasma in air under pulsed bichromatic laser irradiation	V.V. Luchkouski and A.N. Chumakou



37.	3.1.	Self-mixing interferometry for plasma diagnostics	Nikola Goleš, Neda Babucić, Nenad M. Sakan and Milivoje Ivković
38.	3.1.	Study of plasma-flow interaction in low temperature plasma jets	G. B. Sretenović, P. S. Iskrenović, V.V. Kovačević, B. M. Obradović and M. M. Kuraica
39.	3.1.	Application of artificial neural network in the analysis of the spectra from laser ablation combined with fast pulse discharge	Nenad M. Sakan, Milica L. Vinić, Vladimir A. Srećković, Ivan Traparić, and Milivoje R. Ivković
40.	3.1.	Detection of fast nitrogen and oxygen atoms via emission spectroscopy	B.M. Obradović, N. Cvetanović, I.B. Krstić and M.M. Kuraica
41.	3.1.	Modeling of Stark spectral line broadening by machine learning algorithms <b>[Virtual]</b>	Irinel Tapalaga, Ivan Traparić, Nora Trklja Boca, Jagoš Purić and Ivan P. Dojčinović
42.	3.2.	Looking behind the negative glow plasma: estimating cathode sheath parameters by end-on optical emission spectroscopy in a Grimm-type glow discharge source	N. V. Nedić, N. V. Ivanović, I. R. Videnović, D. Spasojević and N. Konjević
43.	3.2.	Corona model for surge wave propagation along the transmission lines	Milan Ignjatovic, Jovan Cvetic, Vera Protic, Nemanja Grbic
44.	3.2.	Breakdown in saturated water vapor	Jelena Marjanović, Dragana Marić, Gordana Malović and Zoran Lj. Petrović
45.	3.3.	Comparison of biocompatibility of organic polymers modified in various types of non-temperature plasmas	Tatiana Vasilieva, Elena Nikolskaya, Michael Vasiliev, Nikita Yabbarov, Maria Sokol, Mariia Mollaeva, Margarita Chirkina
46.	3.3.	Characterization of the dielectric barrier-free atmospheric plasma system <b>[Virtual]</b>	Miroslav Gulan and Vladimir Milosavljević
47.	3.3.	The effect of plasma seed treatment on germination and early growth of thuja koraiensis nakai plants	I.I. Filatova, V.A. Lyushkevich, S.V. Goncharik, U.I. Torchyk, Y.V. Kandratau, M.O. Slesarenka
48.	3.3.	Laser driven electron acceleration by q-Gaussian laser pulse in plasma: effect of self focusing	N. Gupta
49.	4.2.	Winged DRAGN source from Leahy's atlas: 3C 315	A. Arsenic, D. Borka, P. Jovanovic and V. Borka Jovanovic

50.	4.2.	Decomposition of the blended $H\alpha+[N II]$ lines in spectra of the active galactic nuclei type 1.8-2	Jelena Kovačević-Dojčinović, Ivan Dojčinović, Maša Lakićević and Luka Č. Popović
51.	4.2.	The chemi-recombination processes in alkali-metal astrophysical and low-temperature laboratory plasmas: rate coefficients	V.A. Srećković, L.M. Ignjatović, V. Vujčić, M.S. Dimitrijević
52.	4.2.	Higher order non-linear dust ion acoustic (dia) solitary waves in plasmas with weak relativistic effects in electrons and ions <b>[Virtual]</b>	S. Das and D. C. Das
53.	4.2.	The effect of negative ions on Weibel instability in the presence of large amplitude electrostatic waves <b>[Virtual]</b>	Amit Kumar, Jyotsna Sharma