

Dr Dejan Maletić

Research Assistant

Personal Details

Address: Omladinskih brigada 41a/63, 11070 Belgrade, Serbia
Telephone number: +381652150240
Email: dejan_maletic@ipb.ac.rs

Work Experience

Institute of Physics, Belgrade

Research Assistant

May 7th 2011-present

Working as a part of a scientific multidisciplinary team for atmospheric plasma jet development, diagnostic and application on biological samples and other heat sensitive materials. Also working with the Dye Laser for plasma spectroscopy and NdYAG laser for production of nanoparticles in water.

Key responsibilities:

- Working with NdYAG and Dye lasers
- Acquiring data using mass spectrometer, ICCD camera, OES spectrometer, oscilloscopes and other plasma diagnostic techniques
- Constructing new plasma jet sources
- Teaching new PhD students how to use lab equipment and perform experiments
- Data analysis
- Preparing new experiments
- Writing yearly reports
- Seeking offers for new equipment
- Maintaining laboratory equipment
- Installing and testing new equipment
- Transporting and setting up plasma treatment equipment in other labs
- Making posters and preparing publications for scientific journals
- Attending and presenting results on national and international conferences in form of posters or lectures

Institute of Physics, Belgrade

Research Assistant Trainee

November 1st 2008 – May 7th 2011.

Key responsibilities:

- Contribute to achieving the overall laboratory objectives
- Write research reports
- Give presentations
- Preparing charts and graphs
- Keeping laboratory log

Teaching experience

Atmospheric pressure plasma diagnostics for master students of School of Electrical Engineering

Academic Qualifications

2010-2018. Ph.D. in Physics, average grade 10 (100%), Ph.D. thesis grade 10 (100%), Ph.D. thesis theme "*Development and diagnostics of atmospheric plasma jet and application on biological samples*", Faculty of Physics, University of Belgrade

2008-2009. M.Sc. in Physical Chemistry, average grade 9.2 (92%), master thesis grade 10 (100%), master thesis theme "*Detection of ozone and nitrogen oxides in non-equilibrium radio frequency plasma at atmospheric pressure in an oxygen-helium mixture*", Faculty of Physical Chemistry, University of Belgrade

2001-2008. B.Sc. in Physical Chemistry- average grade 8.07 (80.7%), thesis grade 10 (100%), thesis theme "*Mass spectrometer ion and neutral concentration measurement in the small atmospheric radio frequency discharges*", Faculty of Physical Chemistry, University of Belgrade

Awards

B. EN. A. Balkan Environmental Association award for the best B. Sc. Thesis in 2008

Conferences

XXI ESCAMPIG, XX ESCAMPIG, 28th SPIG, 29th SPIG, 7th CESPC

International collaboration

November 28th 2016. to December 19th 2016. STSM (Short-term scientific mission) - "Enhanced plasma jet LIBS spectroscopy" within COST Action TD1208 "Electrical discharges in liquids", Institute of Physics, Zagreb, Croatia

September 16th 2019. to October 4th 2019. Experimental work in the lab "Laser plasma interaction with plasma jets", Institute of Physics, Zagreb, Croatia

Software literacy

Origin lab, MS Office, CorelDraw, Adobe Photoshop, Matlab, Andor Solis, Hiden Mass Soft Pro

Language skills

English – advanced
Serbian – native

Other

Driving license for B category, Military service fulfilled

Scientific papers

1. D. Maletić, N. Puač, N. Selaković, S. Lazović, G. Malović, A. Đorđević, Z. Lj. Petrović; "*Time-resolved optical emission imaging of an atmospheric plasma jet for different electrode positions with a constant electrode gap*"; Plasma Sources Science and Technology 24, 025006 (9pp), 2015, IOP Publishing, United Kingdom
2. D. Maletić, N. Puač, G. Malović, A. Đorđević, Z. Lj. Petrović; "*The influence of electrode configuration on light emission profiles and electrical characteristics of an atmospheric-pressure*

plasma jet"; Journal of Physics D: Applied Physics, 50 145202 (12pp), 2017, IOP Publishing, United Kingdom

3. S. Lazović, D. Maletić, A. Leskovac, J. Filipović, N. Puač, G. Malović, Z. Lj. Petrović, "Plasma induced DNA damage: Comparison with the effects of ionizing radiation", Applied Physics Letters, 105, 124101, 2014, American Institute of Physics, United States
4. M. Miletić, S. Mojsilović, I. Okić Đorđević, D. Maletić, N. Puač, S. Lazović, G. Malović, P. Milenković, Z. Lj. Petrović, D. Bugarski; "Effects of non-thermal atmospheric plasma on human periodontal ligament mesenchymal stem cells", Journal of Physics D: Applied Physics, 46 345401, 2013, IOP Publishing, United Kingdom
5. N. Puač, D. Maletić, S. Lazović, G. Malović, A. Đorđević, Z. Lj. Petrović; "Time resolved optical emission images of an atmospheric pressure plasma jet with transparent electrodes"; Applied Physics Letters, 101, 2, 024103-024103-4, 2012, American Institute of Physics, United States
6. D. Maletić, N. Puač, S. Lazović, G. Malović, T. Gans; V. Schulz-von der Gathen, Z. Lj. Petrović; "Detection of atomic oxygen and nitrogen created in a radio-frequency-driven micro-scale atmospheric pressure plasma jet using mass spectrometry"; Plasma Physics and Controlled Fusion, 54, 12, 124046-124053, 2012, IOP Publishing, United Kingdom
7. S. Lazović, N. Puač, M. Miletić, D. Pavlica, M. Jovanović, D. Bugarski, S. Mojsilović, D. Maletić, G. Malović, P. Milenković, Z. Lj. Petrović; "The effect of a plasma needle on bacteria in planktonic samples and on peripheral blood mesenchymal stem cells", New Journal of Physics, 12, 8, 083037, 2010, IOP Publishing, United Kingdom
8. N. Puač, M. Miletić, M. Mojović, A. Popović-Bijelić, D. Vuković, B. Miličić, D. Maletić, S. Lazović, G. Malović, Z. Lj. Petrović; "Sterilization of bacteria suspensions and identification of radicals deposited during plasma treatment", Open Chemistry, 2015; 13: 332–338, De Gruyter Open, Germany
9. M. Miletić, D. Vuković, I. Živanović, I. Dakić, I. Soldatović, D. Maletić, S. Lazović, G. Malović, Z. Lj. Petrović, N. Puač, "Inhibition of methicillin resistant *Staphylococcus aureus* by a plasma needle", Central European Journal of Physics • 12(3) • 2014 • 160-167, DOI: 10.2478/s11534-014-0437-z, Versita, Poland
10. Z. Lj. Petrović, N. Puač, G. Malović, S. Lazović, D. Maletić, M. Miletić, S. Mojsilović, P. Milenković, D. Bugarski; "Application of non-equilibrium plasmas in medicine", Journal of the Serbian Chemical Society, 77, 12, 142-142, 2012, Serbian Chemical Society, Serbia
11. G. Joksić, A. Valenta Šobot, J. Filipović Tričković, D. Maletić, N. Puač, G. Malović, Z. Lj. Petrović, S. Lazović, "Apoptosis time window induced by cold atmospheric plasma: comparison with ionizing radiation", Current Science, VOL. 116, NO. 7, 10 APRIL 2019, Indian Academy of Sciences, India

Invited progress report on international conference

1. D. Maletić, N. Puač, G. Malović, Z. Lj. Petrović, „ Atmospheric plasma jets: development diagnostics and application for bacteria sterilization”, 29th Summer School and International Symposium on the Physics of Ionized Gases, August 28 – September 1, 2018, Belgrade, Serbia, p144, ISBN 978-86-7306-146-7

Mentor for PhD Thesis

Dr Nevena Puač, Research Professor at the Institute of Physics, Pregrevica 118, Belgrade, Serbia, email: nevena@ipb.ac.rs

Recommendations

Recommendation letters may be demanded from persons below:

1. Dr Nevena Puač, Research Professor at the Institute of Physics, Pregrevica 118, Belgrade, Serbia, email: nevena@ipb.ac.rs
2. Dr Zoran Lj. Petrović, Academician, Serbian Academy of Sciences and Arts, Kneza Mihaila 35, Belgrade, Serbia, email: zoran@ipb.ac.rs
3. Dr Srđan Bukvić, Full Professor, Faculty of Physics, Studentski trg, 11001 Belgrade, Serbia, email: ebukvic@ff.bg.ac.rs