Curriculum Vitae – Nikša Krstulović

Institute of Physics
Bijenička cesta 46
10000 Zagreb
Croatia

http://www.ifs.hr/people/niksa-krstulovic/
https://scholar.google.hr/citations?hl=en&user=etoFQ44AAAAJ
https://www.croris.hr/crosbi/searchByContext/2/1228

1. Education (insert starting and finishing date of each of the levels, chronologically starting from the most recent)

a. Level, university/department, area, year, doctoral thesis title and year of completion

1.2.2011.-30.1.2013. Post-doc, Marie Curie fellowship, University College Dublin, School of Physics, R. Of Ireland

2004-2010. PhD thesis, title: Effects of dual pulse laser ablation, University of Zagreb, Faculty of Natural Sciences, Department of Physics, supervisor: dr. sc. S. Milošević

2004. Diploma thesis, University of Zagreb, Faculty of Natural Sciences, Department of Physics, supervisor: dr. sc. S. Milošević

2. Work experience (chronologically starting from the most recent)

2021-2025 – director's deputy, Institute of Physics, Zagreb

2018 – today – Senior research associate, Institute of Physics, Zagreb

2012 – 2018 – Research associate, Institute of Physics, Zagreb

2010 – 2012 Higher assistant, Institute of Physics, Zagreb

2004 – 2010 Assistant Institute of Physics, Zagreb

3. Professional, scientific, academic experience and accomplishments

a. Ongoing and finished participation in projects

Scientific projects – leader:

2021-2029 Design of a system to detect the Li evaporation on the target - DONES (Demo Oriented Neutron Source), ESFRI/ERDF

2020-2024 Laser synthesis of nanoparticles and applications, HrZZ IP-2019-04-6418

Completed scientific projects – leader:

2020-2021 Atmospheric plasma jet assisted micro-structuring and impregnation of nanoparticles in cellulose for future applications, MZO, HR - AUT bilateral project

2020-2021 Research of metal and metal-oxide sensor possibilities, MZO, HR - SLO bilateral project

2019-2023 Synthesis of advanced nanoparticles and applications in photocatalysis and textile materials, HrZZ - PZS-2019-02-5276 Cooperation program with Croatian scientists in the diaspora "Scientific cooperation"

2019-2021 Laser synthesis and analysis of two-component nanoparticles with increased photocatalytic activity, MZO - HR-SRB bilateral
02-04. 2017 Plasma assisted modification of cellulosic substrate properties and nanoparticles impregnation ESH – Joint Excellence in Science and Humanities (Austrian Academy of Science)
2016-2018 PlasmaArt, Adris Foundation
2016-2017 Laser synthesis of silver nanoparticles in liquids and application to the treatment of bacteria and impregnation in cellulose assisted by cold plasma, Croatian Academy of Science and Arts
2014-2015 Laser synthesis of gold nanoparticles in liquids, Croatian Academy of Science and Arts
2012-2013 Plasma-assisted synthesis of nano-objects, Bilateral SLO-HR project

Scientific projects – associate:
2017-2023 Centre for Advanced Laser Techniques - CALT EU Structural Funds - Operational Program Competitiveness and Cohesion 2014 - 2020, KK.01.1.1.05
2019-2023 The Integrated Initiative of European Laser Research Infrastructures — LASERLAB-EUROPE, European Union's Horizon 2020 research and innovation program under grant agreement no. 871124

Completed scientific projects – associate:
2018-2022 Nanocomposites with perovskites for photovoltaics, photocatalysis and sensors HrZZ -IP-2018-01-5246
2022 A star was born, Ministry of Science and Education, educational project
2021 A star was born, Ministry of Science and Education, educational project
2020 A star was born, Ministry of Science and Education, educational project
2019 A star was born, Ministry of Science and Education, educational project
2014-2017 Laser and cold plasma interaction diagnostics, HrZZ - IP-2013-11-2753
2007-2014 Laser spectroscopy of cold plasma for material processing, MZOS - 035-0352851-2856
2006-2007 Characterization of plasma for the processing of biocompatible materials, MZOŠ, SLO-HR
2002-2006 Laser preparation, control and spectroscopy of new molecules, Ministry of Science and Education (0035003)
2004-2005 Spectroscopy in school, CARNET - Multimedia pilot project
2004-2005 Characterization of reactive plasma for the activation of the surfaces of polymeric materials, Ministry of Education, Science and Technology, bilateral Croatia-Slovenia

b. Scientific/professional awards (if applicable)

2017 Award from Austrian Academy of Science (Joint of Excellence in science and Humanities), fellowship for 3 months stay at TU Graz

2009 16th International Scientific Meeting Vacuum Science and Technique, Bohinj, Slovenia – best poster award

2007 EMS-LIBS Conference, Paris – best poster award

c. Memberships in scientific and professional associations and/or organisations

- **2023-2026** President of the Croatian Vacuum Society
- Member of (former) Croatian Physical Society
- **2023** Panel member for projects evaluation of Croatian Science Foundation
- **2022-today** Member of Steering Committee of DONES.HR consortium and member of Croatian research unit within EUROfusion programme
- **2021** Member of Steering Committee of Institute of Physics
- **2016 – today** Member (President) of evaluation committee for high school experimental works competitions, Agency for science and higher education (AZVO)
- **2022 -** Member of Council of Doctoral studies in Faculty of Physics, University of Rijeka
- COST actions membership (committee member from Croatian side):
  2021-2025 CA20129 Multiscale Irradiation and Chemistry Driven Processes and Related Technologies (MultIChem)
  2013-2017 MP1203 Advanced Spatial and Temporal X-ray Metrology
  2012-2016 TD1208 Electrical discharges with liquids for future applications

d. International conferences lectures and /or lectures at internationally acclaimed scientific organisations (if applicable)

I have 116 contributions from conferences and 12 published conference proceeding papers (source: CROSBI/CRORis databaza). I gave about 50 lectures on conferences, of which 9 invited talks.

List of invited talks:

1. **Krstulović, Nikša**; Blažeka, Damjan; Car, Julio; Grčić, Ivana; Gajović, Andreja, Laser synthesized colloidal nanoparticles: photocatalysis in a fast lane, 94th IUVSTA Workshop on reliable sensing and control of reactive plasmas, 2022
2. **Krstulović, Nikša,** CAVITY RING-DOWN SPECTROSCOPY AS A TOOL FOR PLASMA DIAGNOSTICS, 30th Summer School and th International Symposium on the Physics of Ionized Gases, 2020
3. **Krstulović; Nikša**, Laser synthesis of nanoparticles and applications, Gaseous electronic symposia, Slovenija, 2020.
4. **Krstulović, Nikša**; Blažeka, Damjan; Car, Julio, Synthesis, analysis and applications of nanoparticles prepared by laser ablation in liquids, iPlasmaNano-X, 2019
5. **Krstulović, Nikša**; Blažeka, Damjan, Laser synthesis of colloidal nanoparticles and applications, 8th Central European Symposium on Plasma Chemistry, 2019
6. **Krstulović, Nikša**, Laser produced plasmas studied by cavity ring-down spectroscopy, BIT's 4th Annual Conference and EXPO of Analytix, 2015
7. **Krstulović, Nikša,** Underwater laser synthesis of nanoparticles, 20th International Scientific Meeting on Vacuum Science and Technologies, 2013
8. **Krstulović, Nikša,** Laser produced Plasmas and Applications in Material processing, Book of Abstracts of JVC14, EVC12, AMDVG11 and CROSLOVM19, 2012.

9. **Krstulović, Nikša**; Milošević, Slobodan, Effects of dual-pulse laser ablation for treatment of materials, 16th International Scientific meeting on vacuum science and technique, 2009.

e. Specialisation and study visits at international institutions (if applicable)

1.2.2017-30.4.2017 Plasma assisted modification of cellulosic substrate properties and nanoparticles impregnation ESH – Joint Excellence in Science and Humanities (Austrian Academy of Science)

1.3.2011-28.2.2013 FIRE – Fluids, ions and radiation ensemble, EU project, Marie-Curie Fellowship for postdoc position at University College Dublin, R. Of Ireland, supervisor: Prof. Gerrard O'Sullivan

f. Involvement in congress, events and workshops organisation (if applicable)

2014 21th International Scientific Meeting on Vacuum Science and Technique, Chair of Organizing committee

2014 COST MP 1203, Annual meeting and summer school, organizing committee

2015 Celebration of Internationa Year of Light, organizer of symposium

2017 24th International Scientific Meeting on Vacuum Science and Technique, Program committee

2017 7th CESPC Central European Symposium on Plasma Chemistry, co-chair of conference

2018 8th workshop of Section of Applied and Industrial Physics of Croatian Vacuum Society, organizing committee

2019 26th International Scientific Meeting on Vacuum Science and Technique, Program committee

2019 iPlasmaNano-X 2019, Organization committee

2021 27th International Scientific Meeting on Vacuum Science and Technique, Program committee

2022 28th International Scientific Meeting on Vacuum Science and Technique, Program committee

2023 29th International Scientific Meeting on Vacuum Science and Technique, Program committee

g. Peer review publications (last 5 years)

Source: Web of Science

1. Žužić, Andreja ; Gracin, Davor ; Zubak, Marko ; Macan, Jelena ; Salamon, Krešimir ; Juraić, Krunoslav ; Krstulović, Nikša ; Radičić, Rafaela ; Lukačević, Igor ; Mužević, Matko et al.

The optical properties of strontium manganite thin films prepared by novel phototreatment technique// Journal of alloys and compounds, 951 (2023) 169972, 8 . 10.1016/j.jallcom.2023.169972

2. Syed, Kamran ; Krstulović, Nikša ; Casanova- Cháfer, Juan ; Llobet, Eduard ; Güell, Frank ; R. Martínez-Alanis, Paulina ; Marciuš, Marijan ; Shagieva, Ekaterina ; Ristić, Davor ; Gebavi, Hrvoje et al.

The role of the pulsed laser deposition in different growth atmospheres on the gas-sensing properties of ZnO films// Sensors and actuators. B, Chemical, 382 (2023) 133454, 10 . 10.1016/j.snb.2023.133454

3. Car, Julio ; Krstulović, Nikša

Analytical Model for Determination of Size- Distribution of Colloidal Silver Nanoparticles from Surface Plasmon Resonance Wavelength and Dielectric Functions// Nanomaterials, 12 (2022) 3474, 16 . 10.3390/nano12193474

4. Car, Julio ; Krstulović, Nikša

Fitting Procedure to Reconstruct the Size Distribution and the Concentration of Silver Colloidal Nanoparticles from UV-Vis Spectra// Nanomaterials, 12 (2022) 19 ; 3302, 20 . 10.3390/nano12193302

5. Radičić, Rafaela ; Maletić, Dejan ; Blažeka, Damjan ; Car, JUlio ; Krstulović, Nikša

Synthesis of Silver, Gold, and Platinum Doped Zinc Oxide Nanoparticles by Pulsed Laser Ablation in Water// Nanomaterials, 12 (2022) 3484, 18, 10.3390/nano12193484

6. Blažeka, Damjan ; Radičić, Rafaela ; Maletić, Dejan ; Živković, Sanja ; Momčilović, Miloš ; Krstulović, Nikša

Enhancement of Methylene Blue Photodegradation Rate Using Laser Synthesized Ag-Doped ZnO Nanoparticles// Nanomaterials, 12 (2022) 15 ; 2677, 19 . 10.3390/nano12152677

7. Pietrzak, Karolina ; Krstulović, Nikša ; Blažeka, Damjan ; Car, Julio ; Malinowsky, Szymon ; Wardak, Cecylia

Metal oxide nanoparticles as solid contact in ion- selective electrodes sensitive to potassium ions// Talanta, 243 (2022) 123335, 13 . 10.1016/j.talanta.2022.123335

8. Car, Julio ; Blažeka, Damjan ; Krstulović, Nikša

Advanced quantitative analysis of colloidal solution of metal nanoparticles produced by laser ablation in liquids// Journal of quantitative spectroscopy & radiative transfer, 290 (2022) 108318, 8 . 10.1016/j.jqsrt.2022.108318

9. Blažeka, Damjan ; Car, Julio ; Krstulović, Nikša

Concentration Quantification of TiO2 Nanoparticles Synthesized by Laser Ablation of a Ti Target in Water// Materials, 15 (2022) 3146 ; str. 1-15 . 10.3390/ma15093146

10. Car, Julio ; Blažeka, Damjan ; Bajan, Tamara ; Krce, Lucija ; Aviani, Ivica ; Krstulović, Nikša

A quantitative analysis of colloidal solution of metal nanoparticles produced by laser ablation in liquids// Applied physics. A, Materials science & processing, 127 (2021) 11 ; 838, 14 . 10.1007/s00339-021-04966-z

11. Kutasi, Kinga ; Krstulović, Niksa ; Jurov, Andrea ; Salamon, Krešimir ; Popović, Dean ; Milošević, Slobodan

Controlling the composition of plasma-activated water by Cu ions// Plasma sources science & technology, 40 (2021) 045015, 11 . 10.1088/1361-6595/abf078

12. Blažeka, Damjan ; Car, Julio ; Klobučar, Nikola ; Jurov, Andrea ; Zavašnik, Janez ; Jagodar, Andrea ; Kovačević, Eva ; Krstulović, Nikša

Photodegradation of Methylene Blue and Rhodamine B Using Laser-Synthesized ZnO Nanoparticles// Materials, 13 (2020) str. 1-15 . 10.3390/ma13194357

13. Krce, Lucija ; Šprung, Matilda ; Rončević, Tomislav ; Maravić, Ana ; Čikeš Čulić, Vedrana ; Blažeka, Damjan ; Krstulović, Nikša ; Aviani, Ivica

Probing the Mode of Antibacterial Action of Silver Nanoparticles Synthesized by Laser Ablation in Water: What Fluorescence and AFM Data Tell Us// Nanomaterials, 10 (2020) 6 ; 1040, 20 . 10.3390/nano10061040

14. Perčić, Marko ; Zelenika, Saša ; Mezić, Igor ; Peter, Robert ; Krstulović, Nikša

An experimental methodology for the concurrent characterization of multiple parameters influencing nanoscale friction// Friction, 8 (2020) 3 ; str. 577-593 . 10.1007/s40544-019-0289-z

15. Stefanuik, Robert ; Sokell, Ema ; Long, Elaine ; Krstulovic, Niksa ; Hayden, Paddy ; Mahmoad, Mahmoad ; O'Sullivan, Gerry ; Dunne, Padraig

4d and 5p photoabsorption in laser-produced thulium plasmas// Physical review. A, 101 (2020) 033404, 8 . 10.1103/PhysRevA.101.033404

16. Krce, Lucija ; Šprung, Matilda ; Maravić, Ana ; Umek, Polona ; Salamon, Krešimir ; Krstulović, Nikša ; Aviani, Ivica

Bacteria Exposed to Silver Nanoparticles Synthesized by Laser Ablation in Water: Modelling E. coli Growth and Inactivation// Materials, 13 (2020) 3 ; 653, 21 . 10.3390/ma13030653

17. Kutasi, Kinga ; Popović, Dean ; Krstulović, Nikša ; Milošević, Slobodan

Tuning the composition of plasma-activated water by a surface-wave microwave discharge and a kHz plasma jet// Plasma sources science & technology, 28 (2019) 095010, 11 . 10.1088/1361-6595/ab3c2f

18. Jurov, Andrea ; Popović, dean ; Šrut Rakić, Iva ; Delač Marion, Ida ; Filipič, Gregor ; Kovač, Janez ; Cvelbar, Uroš ; Krstulović, Nikša

Atmospheric pressure plasma jet–assisted impregnation of gold nanoparticles into PVC polymer for various applications// International journal, advanced manufacturing technology, 101 (2019) str. 927-938 . 10.1007/s00170-018-2988-4

19. Panžić, Ivana ; Juraić, Krunoslav ; Krstulović, Nikša ; Šantić, Ana ; Belić, Domagoj ; Blažeka, Damjan ; Plodinec, Milivoj ; Mandić, Vilko ; Macan, Jelena ; Hammud, Adnan et al.

ZnO@TiO2 core shell nanorod arrays with tailored structural, electrical, and optical properties for photovoltaic application// Molecules, 24 (2019) 21 ; 3965, 18 . 10.3390/molecules24213965

20. Schlemmer, Werner ; Fischer, Wolfgang ; Zankel, Armin ; Vukušić, Tomislava ; Filipič, Gregor ; Jurov, Andrea ; Blažeka, Damjan ; Goessler, Walter ; Bauer, Wolfgang ; Spirk, Stefan et al.

Green Procedure to Manufacture Nanoparticle- Decorated Paper Substrates// Materials, 11 (2018) 2412, 12 . 10.3390/ma11122412

21. Krstulović, Nevena ; Bielen, Ana ; Mudronja, Domagoj ; Babić, Ivana ; Krstulović, Nikša

The PlasmaArt Project – Application of Atmospheric-Pressure Plasma Jets in Conservation-Restoration of Wooden Objects// Portal-libraries and the academy, 9 (2018) str. 145-158 . 10.17018/portal.2018.10

22. Krstulović, Nikša ; Salamon, Krešimir ; Budimlija, Ognjen ; Kovač, Janez ; Dasović, Jasna ; Umek, Polona ; Capan, Ivana

Parameters optimization for synthesis of Al- doped ZnO nanoparticles by laser ablation in water// Applied surface science, 440 (2018) str. 916-925 . 10.1016/j.apsusc.2018.01.295

25. Dubček, Pavo ; Pivac, Branko ; **Krstulović, Nikša** ; Milošević, Slobodan ; Bernstorff, Sigrid

Morphological and Fractal Analysis of Thin Ge Films Deposited by Nanosecond Pulsed Laser Ablation// Journal of nanoscience and nanotechnology, 17 (2017) 6 ; str. 4009-4016 . 10.1166/jnn.2017.13092

26. Meljanac, Daniel ; Juraić, Krunoslav ; Plodinec, Milivoj ; Siketić, Zdravko ; Gracin, Davor ; **Krstulović, Nikša** ; Salamon, Krešimir ; Skenderović, Hrvoje ; Kregar, Zlatko ; Šrut Rakić, Iva et al.

Influence of RF excitation during pulsed laser deposition in oxygen atmosphere on the structural properties and luminescence of nanocrystalline ZnO:Al thin films// Journal of vacuum science & technology. A. Vacuum, surfaces, and films, 34 (2016) 021514, 10 . 10.1116/1.4941197

27. **Krstulović, Nikša** ; Bišćan, Marijan ; Milošević, Slobodan

Enhancement of optical emission signal in double- pulse laser ablation of titanium in vacuum// European physical journal D : atomic, molecular and optical physics, 69 (2015) 98, 9 . 10.1140/epjd/e2015-50904-3 **(G, D)**

28. Zaplotnik, Rok ; Bišćan, Marijan ; **Krstulović, Nikša** ; Popović, Dean ; Milošević, Slobodan

Cavity ring-down spectroscopy for atmospheric pressure plasma jet analysis// Plasma sources science & technology, 24 (2015) 5 ; 054004, 14 . 10.1088/0963-0252/24/5/054004

29. **Krstulović, Nikša** ; Salamon, Krešimir ; Modić, Martina ; Bišćan, Marijan ; Milat, Ognjen ; Milošević, Slobodan

Dynamics of double-pulse laser produced titanium plasma inferred from thin film morphology and optical emission spectroscopy// Spectrochimica acta. Part B, Atomic spectroscopy, 107 (2015) str. 67-74 . 10.1016/j.sab.2015.02.008 **(G, D)**

***30**. Jiao, Tifeng ; **Krstulović, Nikša** ; Wu, Bing ; Chen, Xinqing ; Zhang, Qingrui*

Spectroscopy in Materials Chemistry// Journal of Spectroscopy, 2015 (2015) str. 1-2, 10.1155/2015/943894 (editorial)

31. Bišćan, Marijan ; Kregar, Zlatko ; **Krstulović, Nikša** ; Milošević, Slobodan

Spectroscopic characterization of laser-produced GaAs plasma in helium and argon background gases// Optics communications, 315 (2014) str. 37-41 . 10.1016/j.optcom.2013.10.071

32. **Krstulović, Nikša** ; Shannon, Sharon ; Stefanuik, Robert ; Fanara, Carlo

Underwater-laser drilling of aluminum// International journal, advanced manufacturing technology, 69 (2013) 5/8 ; str. 1765-1773 . 10.1007/s00170-013-5141-4 **(G, D)**

33. Dubček, Pavo ; Pivac, Branko ; Milošević, Slobodan ; **Krstulović, Nikša** ; Kregar, Zlatko ; Bernstorff, Sigrid

Pulsed laser ablation of GaAs using nano pulse length// Applied surface science, 257 (2011) 12 ; str. 5358-5361 . 10.1016/j. apsusc.2010.12.028

34. Bišćan, Marijan ; Kregar, Zlatko ; **Krstulović, Nikša** ; Milošević, Slobodan

Time resolved spectroscopic characterization of a-C:H deposition by methane and removal by oxygen inductively coupled RF plasma// Plasma chemistry and plasma processing, 30 (2010) 3 ; str. 401-412 . 10.1007/s11090-010-9226-7

35. **Krstulović, Nikša** ; Milošević, Slobodan

Drilling enhancement by nanosecond-nanosecond collinear dual-pulse laser ablation of titanium in vacuum// Applied surface science, 256 (2010) str. 4142-4148 . 10.1016/j.apsusc.2010.01.098 **(G, D)**

36. **Krstulović, Nikša** ; Cvelbar, Uroš ; Vesel, Alenka ; Milošević, Slobodan ; Mozetič, Miran

Optical emission spectroscopy characterization of oxygen plasma during oxidation of aluminium foils// Materiali in tehnologije, 43 (2009) 5 ; str. 245-249 **(G)**

37. Kregar, Zlatko ; **Krstulović, Nikša** ; Glavan, Nataša ; Milošević, Slobodan

Space and time resolved optical emission spectroscopy characterization of inductively coupled RF water vapour plasma// Journal of physics. D, Applied physics, 42 (2009) 14 ; str. 145201-145208 . 10.1088/0022-3727/42/14/145201

38. **Krstulović, Nikša** ; Čutić, Nino ; Milošević, Slobodan

Cavity RingDown Spectroscopy of collinear dual-pulse laser plasmas in vacuum// Spectrochimica acta. Part B, Atomic spectroscopy, 64 (2009) str. 271-277 . 10.1016/j.sab.2009.02.005 **(G, D)**

39. Mozetič, Miran ; Cvelbar, Uroš ; Vesel, Alenka ; **Krstulović, Nikša** ; Milošević, Slobodan

Interaction of Oxygen Plasma with Aluminium Substrates// Ieee transactions on plasma science, 36 (2008) 4 ; str. 868-869 . 10.1109/TPS.2008.925383

40. **Krstulović, Nikša** ; Čutić, Nino ; Milošević, Slobodan

Spatial and temporal probing of a laser-induced plasma plume by cavity ringdown spectroscopy// Spectrochimica acta. Part B, Atomic spectroscopy, 63 (2008) 11 ; str. 1233-1239 . 10.1016/j.sab.2008.07.004 **(G, D)**

41. **Krstulović, Nikša** ; Čutić, Nino ; Milošević, Slobodan

Modeling of cavity ring-down spectroscopy characterization of laser-induced plasma plume// Ieee transactions on plasma science, 36 (2008) 4 ; str. 1130-1131 . 10.1109/TPS.2008.924609 **(G, D)**

42. Kregar, Zlatko ; **Krstulović, Nikša** ; Milošević, Slobodan ; Kenda, Klemen ; Cvelbar, Uroš ; Mozetič, Miran

Inductively Coupled RF Oxygen Plasma Studied by Spatially Resolved Optical Emission Spectroscopy// Ieee transactions on plasma science, 36 (2008) 4 ; str. 1368-1369 . 10.1109/TPS.2008.920896

43. Cvelbar, Uroš ; **Krstulović, Nikša** ; Milošević, Slobodan ; Mozetič, Miran

Inductively coupled RF oxygen plasma characterization by optical emission spectroscopy// Vacuum, 82 (2007)

44. Vujošević , Danijela ; Mozetič , Miran ; Cvelbar , Uroš ; **Krstulović , Nikša** ; Milošević , Slobodan

Optical emission spectroscopy characterization of oxygen plasma during degradation of Escherichia coli// Journal of applied physics, 101 (2007) 10 ; str. 1033051-1-1033051-7

45. Cvelbar , Uroš ; Mozetič , Miran ; Junkar , Ita ; Vesel , Alenka ; Kovač , Janez ; Drenik , Aleksander ; Vrlinič , Tjaša ; Hauptman, Nina ; Klanjšek-Gunde, Marta ; Markoli , Boštjan et al.

Oxygen plasma functionalization of poly(p-phenilene sulphide)// Applied surface science, 253 (2007) 21 ; str. 8669-8673

46. Vesel , Alenka ; Mozetič , Miran ; Hladnik , Ales ; Dolenc , Jožica ; Zule , Janja ; Milošević , Slobodan ; **Krstulović , Nikša** ; Klanjšek-Gunde , Marta ; Hauptmann , Nina

Modification of ink-jet paper by oxygen-plasma treatment// Journal of physics. D, Applied physics, 40 (2007) 12 ; str. 3689-3696 . 10.1088/0022-3727/40/12/022

47. **Krstulović, Nikša** ; Labazan, Irena ; Milošević, Slobodan ; Cvelbar, Uroš ; Vesel, Alenka ; Mozetič, Miran

Optical emission spectroscopy characterization of oxygen plasma during treatment of a PET foil// Journal of physics. D, Applied physics, 39 (2006) 17 **(G, D)**

48. **Krstulović, Nikša** ; Labazan, Irena ; Milošević, Slobodan

Study of Mn laser ablation in methane atmosphere// European physical journal D : atomic, molecular and optical physics, 37 (2006) **(G)**

49. Labazan, Irena ; **Krstulović, Nikša** ; Milošević, Slobodan

Laser vaporization of LiAlH4 solid samples// Chemical physics letters, 428 (2006)

50. Vesel, Alenka ; Mozetič, Miran ; Drenik, Aleksander ; Milošević , Slobodan ; **Krstulović, Nikša** ; Balat-Pichelin, Marianne ; Poberaj, Igor ; Babić, Dušan

Cleaning of porous aluminium titanate by oxygen plasma// Plasma chemistry and plasma processing, 26 (2006) 6

51. Labazan, Irena ; **Krstulović, Nikša** ; Milošević, Slobodan

Observation of C(_2) radicals formed by laser ablation of graphite targets using cavity ring-down spectroscopy// Journal of physics. D, Applied physics, 36 (2003) 20

h. Previous experience in innovation development

I'm co-author in 1 patent and 2 patent applications:

1. Krstulović, Nikša; Blažeka, Damjan; Car, Julio; Maletić, Dejan; Radičić, Rafaela; Rakić, Mario

Method of producing two-component nanoparticles from a two-component target using a laser. Patent number P20220951A (patent application, 2022)

2. Krstulović, Nikša; Blažeka, Damjan; Car, Julio; Maletić, Dejan; Rakić, Mario

Method of production of two - component nanoparticles using laser. Patent number P20211098A (patent application, 2021)

3. Cvelbar, Uroš; Mozetič, Miran; Milošević, Slobodan; Krstulović, Nikša

Metoda in naprava za selektivno jedkanje kompozitnih materialov z lasersko ablacijo. Patent number SI 22288A (31.12.2007)

i. Other research achievements

- Development of innovative synthesis of nanoparticles with applications in photocatalysis for water purification and in polymer and textile materials, improving their antimicrobial, biodegradability, permeability and UV protection factor. The research was carried out as part of two HrZZ projects PZS-2019-02-5276 and IP-2019-04-6418 and several bilateral ones. Research has been published in more than 10 scientific papers and supported by two patent applications.
- Development of detectors for Li, Deuterium and Tritium for the needs of the Dones fusion reactor in Granada. The detector is based on high-sensitivity Cavity ring-down spectroscopy, and will provide important information about the leakage of mentioned gases from the reactor into the drain pipes. The research is in the phase of concept verification and two tasks have been approved within the project; one related to the production of the detector and the other related to the irradiation of the components and the testing of their resistance to neutron radiation.