

Jana Mišurović

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WORK EXPERIENCE

University of Montenegro, Faculty of Metallurgy and Technology (MTF)

- **Since September 2022 – engaged for lectures on several courses under the supervision of full professors:**
 - **Physicochemical processes in environmental protection** – undergraduate studies of Environmental protection
 - **Chemical Kinetics and Catalysis, Energy storage and conversion** – master studies of Chemical Technology
- **Since September 2018 – Position: Teaching Assistant in the field of Physical Chemistry** (laboratory and computational exercises with students) for the subjects:
 - **Chemical Thermodynamics, Physical Chemistry I, Physical Chemistry II, Electrochemistry, Mass and Heat transfer engineering** – undergraduate studies of Chemical Technology
 - **Physical Chemistry with Electrochemistry** – undergraduate studies of Metallurgy and materials
 - **Physicochemical processes in environmental protection** – undergraduate studies of Environmental protection
 - **Physical Chemistry, Colloidal and surface chemistry** – Faculty of Medicine, undergraduate studies of Pharmacy
 - **Chemical Kinetics and Catalysis, Energy storage and conversion, Protective coatings** – master studies of Chemical Technology
 - **Alternative energy sources**, master studies of Environmental protection

• 15.01.2015. – 15.10.2015. University of Montenegro, Faculty of Metallurgy and Technology

Internship within the program of professional training of persons with higher education, realized by the Government of Montenegro for the academic 2014/2015 year

Position: Lab technician at the Laboratory for Analytical Chemistry and Instrumental Methods

EDUCATION AND TRAINING

Ph.D. Physical Chemistry PhD studies of Physical Chemistry (October 2016 – December 2021)

Faculty of Physical Chemistry, University of Belgrade, Serbia

Ph.D. thesis: "Synthesis of polyaniline and other poly(arylamines) using Fe₃O₄ nanoparticles as a catalyst"

MSc Physical Chemistry Master studies of Physical Chemistry (October 2015 – September 2016)

Faculty of Physical Chemistry, University of Belgrade, Serbia

Master thesis: "Synthesis and characterization of nanofibrous polyaniline"

Spec. Sci. Inorganic Chemical Technology Postgraduate Specialist Studies of Inorganic Chemical technology (September 2014 – June 2015)

Faculty of Metallurgy and Technology, University of Montenegro, Montenegro

Specialist thesis: "The influence of the content of alkaline activator and binder on the properties of fly ash and red mud based geopolymers"

BSc Chemical Technology Undergraduate studies of Chemical Technology (September 2011 – September 2014)

Faculty of Metallurgy and Technology, University of Montenegro, Montenegro

RESEARCH INTEREST

Physical Chemistry of materials, Material characterization, Electrochemistry, Electroconductive polymers, Biomass derived carbon materials, Energy storage and conversion systems.

SCIENTIFIC PROJECTS

- **Jan-Sept 2023 CRESCENTO - CiRcular Economy Skills enhANCement NeTwOrk**, Adriatic-Ionian ADRION Programme
- **2023-2024 Biomass-derived carbons as anodes in sodium-ion batteries**, scientific and technological cooperation between Montenegro and the Republic of Slovenia for the period 2023-2024. (PI from MTF: Prof. Dr. Veselinka Grudić, cooperation with the National Institute for Chemistry, Ljubljana, Slovenia, PI Prof. Dr. Robert Dominko). role: participant, young researcher

- **2023-2024 Production of high-value products by recycling waste in the aluminum industry**, scientific and technological cooperation between Montenegro and the Republic of Slovenia for the period 2023-2024. (PI from MTF: Prof. Dr. Mira Vukčević, cooperation with the Slovenian National Building and Civil Engineering Institute, supervisor Dr. Ana Mladenović) role: participant, young researcher
- **2021-2024 – SUPERCAR "Carbon-based Batteries and Supercapacitors"** G5836, funded by NATO Science for Peace and Security (SPS) Programme. Project between Slovenia, Serbia and Montenegro. (NPD Prof. Robert Dominko, National Institute for Chemistry, Ljubljana, Slovenia; PPD Milica Vujković, PhD, Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia; Co-Director Prof. Veselinka Grudić, Faculty of Metallurgy and Technology, University of Montenegro, Podgorica, Montenegro), role: participant, young researcher
- **2020-2022 – BIOUGALJ "Green chemistry for sustainable energy: Biomass-derived carbon as electrode for energy storage"**, Ministry of Science of Montenegro, PI Prof. Veselinka Grudić, role: participant, young researcher
- **2020-2022 – "Preparation of the end-of-waste criteria for concluding the status of waste"** Ministry of Science of Montenegro, PI Prof. Mira Vukčević, role: participant, young researcher
- **2020-2023 – "Evaluation of red mud tailings in the region of South East Europe, RIS-RESTORE"**, European Institute of Innovation and Technology, PI Prof. Mira Vukčević, role: participant
- **2019-2023 – COST Action CA18224 – Green Chemical Engineering Network towards upscaling sustainable processes**
- **November-December 2019 – "Materials for energy storage"**, Ministry of Science of Montenegro, PI Prof. Veselinka Grudić, role: participant
- **2018-2019 – "Electroconductive and redox-active polymers and oligomers: synthesis, structure, properties and application"** Ministry of Education and Science, Republic of Serbia, PI Prof. Gordana Ćirić-Marjanović, role: PhD student

PERSONAL SKILLS AND COMPETENCES

Languages: English – C1, Spanish – B2, Italian – B2

Digital skills: OriginLab, ChemDraw, Microsoft Office, photo editing software, AutoCAD, MatLab.

Instrumental techniques: Fourier-transform infrared spectroscopy (FTIR), UV-Vis-NIR spectroscopy, Electrochemical methods: Cyclic Voltammetry, Chronopotentiometry, Galvanostatic Charge/Discharge, X-ray Powder Diffractometry, Atomic Absorption Spectroscopy (AAS)

Honours and awards:

- **First prize for the best poster presentation** at the Materials for Sustainable Development Conference (MATSUS23), within the symposium Enabling Beyond Classical Li-ion Batteries through materials development and sustainability, March 6-10th, 2023, Valencia, Spain.
- **Award for the best doctoral dissertation** defended in the period between the two YUCOMAT conferences, awarded by the Materials Research Society of Serbia at the 23rd YUCOMAT conference, Aug 29 – Sept 2, 2022.
- **The best oral presentation award** at The 16th Young Researchers' Conference Materials Sciences and Engineering, December 6-8, 2017, Belgrade, Serbia.
- **Montenegrin Ministry of Education scholarship for the best students** in 2013/2014 academic year.

Trainings and mobility:

- **Visiting researcher – Laboratory for Modern Battery Systems, National Institute of Chemistry, Ljubljana, Slovenia** (Head of Laboratory Prof. Robert Dominko). **June 30 - July 29, 2022** – training related to the development of hard carbon anodes for Na-ion batteries realized within NATO SPS project Carbon-based Batteries and Supercapacitors, G5836.
- **Teaching in English Workshop for University of Montenegro Lecturers, February – March, 2022** English language programs, supported by the Embassy of the United States of America.
- **ERASMUS + ICM teaching mobility – Keele University, United Kingdom** (School of Chemical and Physical Sciences, Lennard-Jones Building), **December 3-7, 2018**.
- **IUPAC Postgraduate Summer School on Green Chemistry, July 7-13, 2018**, Venice, Italy. (*L'Oreal stipend recipient*)
- **CONTACT Workshop – CERIC-CEI, June 26–27, 2017**, Trieste, Italy. **Training in advanced material characterization in Large Scale Research Infrastructures, CERIC Headquarters.**

Invited lectures:

- Keynote lecture "Vine shoots-derived carbon: from Al-ion supercapacitors to Na-ion batteries" 9th Regional Symposium on Electrochemistry – South-East Europe, Novi Sad, 3-7. June, 2024.
- Invited lecture "Comparison of charge storage ability of polyaniline and poly(p-aminodiphenylamine)", Contemporary Batteries and Supercapacitors International Symposium Belgrade, Serbian Academy of Sciences and Arts, Belgrade, 1-2. June, 2022.

Other activities:

- **Technical Committee member** – International conference YUCOMAT 2024 & XIII WRTCS, Herceg Novi, Montenegro, 2-6. September, 2024. (<https://mrs-serbia.org.rs/index.php/youcomat/youcomat-2024-xiii-wrtcs>)
- **Organizing Committee member** – 9th Regional Symposium on Electrochemistry of South-East Europe, Novi Sad, Serbia, 3-7. June, 2024 (<https://aseee.eu/index.php/committiee>)
- **Member of the organizing team and lecturer at the summer school** for students "Methods for physicochemical characterization of energy storage materials" – September 19-25th, 2022.
- **Technical Committee member** – COIN2022 Contemporary batteries and supercapacitors, International Symposium Belgrade, June 1-2, 2022, Serbian Academy of Sciences and Arts, Belgrade (www.coin2022.org)
- Part of the team in charge of **preparing Montenegrin competitors for the International Chemistry Olympiad 2022** – responsible for the field of Physical Chemistry
- **Member of "The Association of South-East European Electrochemists"**

BIBLIOGRAPHY

Publications

1. **Jana Mišurović**, Aleksandra Gezović, Veselinka Grudić, Robert Dominko, Milica Vujković, Exploring the impact of Al-based electrolytes on the charge storage behavior of vine shoots derived carbon, Journal of Electrochemical Science and Engineering (2024) 2532. <https://doi.org/10.5599/jese.2532>
2. Jadranka Milikić, **Jana Mišurović**, Lazar Rakočević, Igor A Pašti, Gordana Ćirić-Marjanović, Biljana Šljukić, Polyaniline prepared by Fe₃O₄ catalysed eco-friendly synthesis as electrocatalyst for efficient water electrolysis, Journal of Electrochemical Science and Engineering (2024) 2438. <https://doi.org/10.5599/jese.2438>
3. Aleksandra Gezović¹, **Jana Mišurović**¹, Branislav Milovanović, Mihajlo Etinski, Jugoslav Krstić, Veselinka Grudić, Robert Dominko, Slavko Mentus, Milica J. Vujković, High Al-ion storage of vine shoots-derived activated carbon: New concept for affordable and sustainable supercapacitors, Journal of Power Sources, 538 (2022) 231561. <https://doi.org/10.1016/j.jpowsour.2022.231561>
4. **Jana Mišurović**, Miloš Mojović, Budimir Marjanović, Predrag Vulić, Gordana Ćirić-Marjanović, Magnetite nanoparticles-catalysed synthesis of conductive poly(p-aminodiphenylamine), Synthetic Metals, 269 (2020) 116577. <https://doi.org/10.1016/j.synthmet.2020.116577>
5. **Jana Mišurović**, Miloš Mojović, Budimir Marjanović, Predrag Vulić, Gordana Ćirić-Marjanović, Magnetite nanoparticles-catalysed synthesis of conductive polyaniline, Synthetic Metals, 257 (2019) 116174. <https://doi.org/10.1016/j.synthmet.2019.116174>
6. **Jana Mišurović**, Gordana Ćirić-Marjanović, Synthesis and Structural Characterization of Nanofibrous Polyaniline, Technique-New Materials, 73 (4) (2018) 463-469. <http://dx.doi.org/10.5937/tehnika1804463M>

Scientific announcements

1. **Jana Mišurović**, Slađana Kovačević, Ksenija Petković, Milica Kosović Perutović, Zorica Leka, The Antioxidant Capacity of AmmoniumIminodiacetatedithiocarbamate and Its Transition Metal Complexes, 27th Congress of SCTM Sept. 25-28, 2024, Metropol Lake Resort, Ohrid, N. Macedonia, The Book of Abstracts, p. 159.
2. Slađana Kovačević, Marija Ristić, **Jana Mišurović**, Zorica Leka, Milica Kosović Perutović, Efficient Solvent-Free Synthesis of Ni(II)-Dithiocarbamate Complexes using Mechanochemistry, 27th Congress of SCTM Sept. 25-28, 2024, Metropol Lake Resort, Ohrid, N. Macedonia, The Book of Abstracts, p. 106.
3. Milica Kosović Perutović, Slađana Kovačević, Marija Ristić, **Jana Mišurović**, Zorica Leka, Mechanochemical Synthesis of Cu(II) dithiocarbamate complex: Advantages Over Traditional Solution-Based Methods, 27th Congress of SCTM Sept. 25-28, 2024, Metropol Lake Resort, Ohrid, N. Macedonia, The Book of Abstracts, p. 105.
4. **Jana Mišurović**, Aleksandra Gezović Miljanić, Alen Vižintin, Veselinka Grudić, Robert Dominko, Milica Vujković, Full cell sodium storage performance of biomass-derived nongraphitizable carbon, 25th YUCOMAT 2024 & XIII WRTCS, Herceg Novi, September 2 - 6, 2024 The Book of Abstracts, p.102.
5. Milica Vujković, Aleksandra Gezović Miljanić, **Jana Mišurović**, Alen Vižintin, Slavko Mentus, Robert Dominko, Exploring the potential of Na₄Fe₃(PO₄)₂P₂O₇/C as a cathode material for Na-ion rechargeable batteries, 25th YUCOMAT 2024 & XIII WRTCS, Herceg Novi, September 2 - 6, 2024 The Book of Abstracts, p.37.

6. Minea Kapidžić, **Jana Mišurović**, Veselinka Grudić, Milica Vujković, Assessing the charge storage capability of hydrothermally treated biomass-derived activated carbon in different electrolyte formulations, 25th YUCOMAT 2024 & XIII WRTCS, Herceg Novi, September 2 - 6, 2024 The Book of Abstracts, p.56.
7. Kristina Lalatović, Minea Kapidžić, Sonja Kastratović, Veselinka Grudić, Milica Vujković, **Jana Mišurović**, Exploring the potential of olive mill waste for the production of energy storage materials, 25th YUCOMAT 2024 & XIII WRTCS, Herceg Novi, September 2 - 6, 2024 The Book of Abstracts, p.57.
8. Slađana Kovačević, Milica Kosović Perutović, Marija Ristić, **Jana Mišurović**, Zorica Leka, Mechanochemical Synthesis of Ammonium-Iminodiacetate-Dithiocarbamate: An Environmentally Friendly Approach, 25th YUCOMAT 2024 & XIII WRTCS, Herceg Novi, September 2 - 6, 2024 The Book of Abstracts, p.53.
9. **Jana Mišurović**, Aleksandra Gezović, Veselinka Grudić, Robert Dominko, Milica Vujković, Vine shoots-derived carbon: from Al-ion supercapacitors to Na-ion batteries, 9th Regional Symposium on Electrochemistry – South-East Europe, June 3-7th, 2024, Novi Sad, Serbia, The Book of Abstracts, p.12.
10. Minea Kapidžić, **Jana Mišurović**, Veselinka Grudić, Milica Vujković, The influence of ZnCl₂ on the capacitance of hydrothermally synthesized vine shoots-derived carbon, Twenty-First Young Researchers Conference – Materials Science and Engineering November 29 – December 1, 2023, Belgrade, Serbia, The Book of Abstracts, p.74.
11. Sonja Kastratović, Minea Kapidžić, Danilo Marković, Veselinka Grudić, Milica Vujković, **Jana Mišurović**, Hydrothermal carbonization of olive mill waste to electrode materials, Twenty-First Young Researchers Conference – Materials Science and Engineering November 29 – December 1, 2023, Belgrade, Serbia, The Book of Abstracts, 75.
12. **Jana Mišurović**, Aleksandra Gezović, Veselinka Grudić, Milica Vujković, Capacitive behaviour of biomass-derived activated carbon in Al-ion containing electrolytes, 2nd International Conference on Chemo and Bioinformatics, September 28-29, 2023, Kragujevac, Serbia, The Conference Proceedings, p.253
13. Minea Kapidžić, Sonja Kastratović, Milica Vujković, Veselinka Grudić, **Jana Mišurović**, The interdependence of structural properties and pseudocapacitive behavior of biomass-derived activated carbon, 2nd International Conference on Chemo and Bioinformatics, September 28-29, 2023, Kragujevac, Serbia, The Conference Proceedings, p.257.
14. Milica Kosović Perutović, Zorica Leka, Miljan Bigović, **Jana Mišurović**, Valentina Medojević, Mechanochemistry: optimization of the synthesis of dithiocarbamate derivatives, 2nd International Conference on Chemo and Bioinformatics, September 28-29, 2023, Kragujevac, Serbia, The Conference Proceedings, p.249.
15. **Jana Mišurović**, Aleksandra Gezović, Blaž Tratnik, Alen Vižintin, Veselinka Grudić, Robert Dominko, Milica Vujković, Sodium-ion storage mechanism investigation of vine shoots-derived hard carbon, TWENTYFOURTH ANNUAL CONFERENCE – YUCOMAT 2023, Herceg Novi, September 4-8, 2023, The Book of Abstracts p.58.
16. Minea Kapidžić, **Jana Mišurović**, Milica Vujković, Veselinka Grudić, Hydrothermally activated vine shoots for carbon-based aqueous supercapacitors, TWENTYFOURTH ANNUAL CONFERENCE – YUCOMAT 2023, Herceg Novi, September 4-8, 2023, The Book of Abstracts p.80.
17. Sonja Kastratović, Minea Kapidžić, Danilo Marković, Veselinka Grudić, Milica Vujković, **Jana Mišurović**, Olive mill waste to carbon electrode for aqueous supercapacitors, TWENTYFOURTH ANNUAL CONFERENCE – YUCOMAT 2023, Herceg Novi, September 4-8, 2023, The Book of Abstracts p.85.
18. Danilo Marković, **Jana Mišurović**, Veselinka Grudić, Milica Vujković, Novel synthetic approach of NaCrO₂ as a cathode material for aqueous sodium ion battery, TWENTYFOURTH ANNUAL CONFERENCE – YUCOMAT 2023, Herceg Novi, September 4-8, 2023, The Book of Abstracts p.86.
19. Tamara Petrović, **Jana Mišurović**, Aleksandra Gezović, Danica Bajuk-Bogdanović, Veselinka Grudić, Milica Vujković, Mg and Ca-ion Storage of Vine Shoots-derived Activated Carbon, ISNRE2023 conference, London, August 14-16, 2023.
20. Milica J. Vujković, Aleksandra Gezović, **Jana Mišurović**, Veselinka Grudić, Robert Dominko, Development of materials for new generation battery systems, Contemporary aspirations in electrochemistry in the process of transition to renewable energy sources. Scientific meeting dedicated to the 100th anniversary of the birth of the foreign member of the Serbian Academy of Sciences and Arts John O'Mara Bockris, June 5, 2023. The Serbian Academy of Sciences and Arts, Belgrade, Serbia, Book of Abstracts, p.6.
21. **Jana Mišurović**, Aleksandra Gezović, Blaž Tratnik, Alen Vižintin, Veselinka Grudić, Robert Dominko, Milica Vujković, Vine shoots-derived hard carbon as an anode for Na-ion batteries, Materials for Sustainable Development Conference, #SusBat - Enabling Beyond Classical Li-ion Batteries through materials development and sustainability, Proceedings of MATSUS23 & Sustainable Technology Forum València, València, Spain, March 6-10th, 2023.
22. Aleksandra Gezović, **Jana Mišurović**, Jugoslav Krstić, Alen Vižintin, Veselinka Grudić, Robert Dominko, Milica Vujković, How does activation affect Na storage properties of carbon obtained from vine shoots?, Materials for Sustainable Development Conference, #SusBat - Enabling Beyond Classical Li-ion Batteries through materials development and sustainability, Proceedings of MATSUS23 & Sustainable Technology Forum València, València, Spain, March 6-10th, 2023.

23. Tamara Petrović, Miloš Milović, Aleksandra Gezović, **Jana Mišurović**, Veselinka Grudić, Milica Vujković, Hybrid aqueous Ca-ion battery: Design and Performance, Twentieth Young Researchers Conference – Materials Science and Engineering, November 30 – December 2, 2022, Belgrade, Serbia, The Book of Abstracts, p.67.
24. **Jana Mišurović**, Gordana Ćirić-Marjanović, New directions of arylamines oxidation with H₂O₂: polymerization of aniline in the presence of para-aminodiphenylamine, YUCOMAT 2022 & XII WRTCS, August 29 - September 2, 2022 Herceg Novi, Montenegro, The Book of Abstracts, p. 107.
25. **Jana Mišurović**, Aleksandra Gezović, Jugoslav Krstić, Branislav Milovanović, Veselinka Grudić, Slavko Mentus, Milica Vujković, Comparative study of biomass-derived carbon interfacial processes in Aluminum-based and conventional acidic electrolyte, YUCOMAT 2022 & XII WRTCS, August 29 - September 2, 2022 Herceg Novi, Montenegro, The Book of Abstracts, p. 91.
26. **Jana Mišurović**, Gordana Ćirić-Marjanović, Comparison of charge storage ability of polyaniline and poly(p-aminodiphenylamine), Contemporary batteries and supercapacitors, COIN2022 International Symposium Belgrade, June 1-2, 2022, Serbian Academy of Sciences and Arts, Belgrade, Serbia, The Book of Abstracts, p.12.
27. Aleksandra Gezović, **Jana Mišurović**, Jugoslav Krstić, Veselinka Grudić, Slavko Mentus, Milica Vujković, Al-ion charge storage ability of vine shoots-derived carbon, Contemporary batteries and supercapacitors, COIN2022 International Symposium Belgrade, June 1-2, 2022, Serbian Academy of Sciences and Arts, Belgrade, Serbia, The Book of Abstracts, p.35.
28. **Jana Mišurović**, Budimir Marjanović, Gordana Ćirić-Marjanović, Spectroscopic characterization and redox behaviour of electroconducting poly(p-ADPA) synthesized by simple and eco-friendly method using magnetite nanoparticles as a catalyst, YUCOMAT 2021, August 30 – September 3, 2021, Herceg Novi, Montenegro, The Book of Abstracts, p.95.
29. Veselinka Grudić, Aleksandra Gezović, **Jana Mišurović**, Jugoslav Krstić, Milica Vujković, Activated Carbon Derived from Vine Shoots as Electrode Material for High-Performance Supercapacitors, YUCOMAT 2021, August 30 – September 3, 2021, Herceg Novi, Montenegro, The Book of Abstracts, p.100.
30. **Jana Mišurović**, Gordana Ćirić-Marjanović, Danica Bajuk-Bogdanović, Investigation of Aniline and p-aminodiphenylamine Oxidation Products formed using Fe₃O₄ NPs/H₂O₂ system: Structure and Electrochemical Behaviour, 71st Annual Meeting of the International Society of Electrochemistry, 30 August - 4 September 2020, Belgrade, Serbia.
31. **Jana Mišurović**, Gordana Ćirić-Marjanović, Novel, eco-friendly approach for the oxidative polymerization of aniline using Fe₃O₄ nanoparticles/H₂O₂ catalytic system, The 18th Young Researchers' Conference Materials Sciences and Engineering, December 4-6, 2019, Belgrade, Serbia, The Book of Abstracts, p.47.
32. **Jana Mišurović**, Gordana Ćirić-Marjanović, Nanofibrous polyaniline preparation by the oxidative polymerization of aniline with the oxidant in excess: Raman and FTIR spectroscopy study, Twentieth Annual Conference YUCOMAT 2018, September 3-7, 2018, Herceg Novi, Montenegro, The Book of Abstracts, p.115.
33. **Jana Mišurović**, Gordana Ćirić-Marjanović, Fe₃O₄-assisted oxidative polymerization of aniline, IUPAC Postgraduate Summer School on Green Chemistry, July 7-13, 2018, Venice, Italy, The Book of Abstracts, p.62.
34. **Jana Mišurović**, Gordana Ćirić Marjanović, Synthesis and characterization of nanofibrous polyaniline, The 16th Young Researchers' Conference Materials Sciences and Engineering, December 6-8, 2017, Belgrade, Serbia, The Book of Abstracts, p.46.
35. **Jana Mišurović**, The influence of operating parameters on the compressive strength of fly ash and red mud based geopolymers, Second International Student Environmental Conference – FISEC16, May 18-22, 2016, Belgrade, Serbia, The Book of Abstracts, p.32.