



COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Zeljko Petrovski

Type (Academic or Industrial): Academic

Country: Portugal

Leadership position in the COST:

Working Group in which you are involved: WG1

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Laboratory/Company:

"Cultural Heritage and Responsive Materials" group, CHARM

LAQV-REQUIMTE, Departamento de Química

Faculdade de Ciências e Tecnologia - Universidade Nova de Lisboa

Laboratory/Company info (limited to 400 characters):

Cultural Heritage and Responsive Materials (CHARM) is a multidisciplinary research group focused on design of molecules, materials and Cultural Heritage. The main group interests are: mechanisms of alteration; historical reconstructions database; anthocyanin, flavylum salts & Ionic liquids; light activated sensors and actuators; electrochromic devices and luminescent glass materials.

Link to the home page of the Laboratory/Company:

<https://laqv.requimte.pt/research/research-groups/112-cultural-heritage-and-responsive-materials>

Fields of expertise (limited to 400 characters):

- Development of new ionic liquids and porous materials for catalysis, materials research and drug delivery;
- Small molecules synthesis, isolation and characterization;
- Pollutant removal and degradation.

5 Main publications or patents:

- Branco, L. C., Ferraz, R., Teixeira, V., Rodrigues, D., Fernandes, R., Prudêncio, C., Noronha, J. P., Petrovski, Z., "Antibacterial activity of Ionic Liquids based on ampicillin against resistant bacteria" *RSC (Advances)* **2014**, *4*, 4301-4307.
- Ferraz, R., Silva, D., Dias, A. R., Dias, V., Santos, M. M., Pinheiro, L., Prudêncio, C., Noronha, J. P., Petrovski, Z., Branco, L. C. "Synthesis and Antibacterial Activity of Ionic Liquids and Organic Salts Based on Penicillin G and Amoxicillin hydrolysate Derivatives against Resistant Bacteria" *Pharmaceutics* **2020**, *12*, 221.
- Petrovski, Z., Martins, B. M., Afonso, C. A. M. "Short synthesis of methylenecyclopentenones by intermolecular Pauson–Khand reaction of allylthiourea" *Tetrahedron Lett* **2010**, *51*, 3356–3359.
- Santos, M.



- M., Alves, C., Silva, J. Florindo, C., Costa, A. 1, Petrovski, Z., Marrucho, I. M., Pedrosa, R. Branco, L. C. “Antimicrobial Activities of Highly Bioavailable Organic Salts and Ionic Liquids from Fluoroquinolones” *Pharmaceutics* **2020**, *12*, 694.
- da Costa Duarte Pardal, T., Reis-Machado, A. M. S., Messias, S. A., Pereira, N. S., Pereira, Messias, S. A., Bucho Nunes da Sousa, M., Rei Fernandes, T. C., da Costa Franco Afonso, J., da Magalhães Nunes da Ponte, M. L., Petrovski, Z., da Silva Nunes Gomes, D., Ferrão de Paiva Martins, R., Rangel Archila, C. M. “Electrochemical reduction of carbon dioxide in aqueous ionic liquid containing electrolytes” WO2016178590. 2016.

Collaborations:

- Luís C. Branco, Miguel Santos, Inês Matos, Susana Gaudêncio, Ana Nunes (FCT-UNL Monte Caparica, Portugal)
- Alice Martins, Celso Alves (IP, Leiria, Portugal)
- Ricardo Ferraz (IP, Porto, Portugal)
- Raoni Schroeder, Pierre Motte Esteves (UFRJ, Rio de Janeiro, Brasil)

Facilities:

In addition to basic small equipment for laboratory of organic chemistry (heating plates, laboratory evaporators, vacuum pumps) CHARM group possess also Spectrophotometer Cary 5000 (UV-vis-NIR), Laser Flash Photolysis Applied Photophysics LKS 60, Potentiostat/Galvanostat EcoChemie Autolab, Classic irradiation Lamps Newport Newport 66902, Stopped flow Applied Photophysics Flash Flow, Liophilizer Telstar Cryodos 45 and Dynamic Light Scattering/Zeta Potential Analyzer Horiba Scientific NanoPartica SZ-100.