

1. J Santillán, E Nicolau, et al. **Electrosprayed Nanohydroxyapatite and Nanodiamonds as Biocompatible Additives for Cellulose-based Scaffolds: Applications to Bone Tissue Regeneration.** To be submitted (2022)
2. J. Pazol, E. Nicolau, et al. **Enzymatic inhibition of E. coli Lipopolysaccharides (Ra LPS) via in-vitro hydrolysis using lipase b from Candida Antarctica (CALB) in aqueous systems** To be submitted (2022)
3. J. Pazol, E. Nicolau, et al. **Phase influence of lipopolysaccharides aggregates architectures on the enzymatic activity response to liberate free fatty acids (FFA) in aqueous solution.** Submitted to Journal of Colloids and Interface Science (2022)
4. Juan C. Muñoz-Senmache, Perla E. Cruz-Tato, Eduardo Nicolau, Arturo J. Hernández-Maldonado, **Confined space synthesis of chromium-based metal-organic frameworks in activated carbon: Synergistic effect on the adsorption of contaminants of emerging concern from water,** Journal of Environmental Chemical Engineering, Volume 10, Issue 2, 2022, 107282, <https://doi.org/10.1016/j.jece.2022.107282>.
5. Betancourt-Ponce, Miguel; Morales-Guzmán, Christian; Cruz-Tato, Perla; Nicolau, Eduardo. **Probing the Effect of Amine N-Oxide Zwitterionic Polymer Additives in Polysulfone Forward Osmosis Membranes.** ACS Applied Polymer Materials, DOI: 10.1021/acsapm.1c01745 (2022)
6. Liz N. Santiago-Martoral, Adrialis M. Figueroa, and Eduardo Nicolau **Biomimetic Membrane Performance in Pressure Retarded Osmosis for Water Reclamation Applications** 50th International Conference on Environmental Systems ICES-2021-458 (2021)
7. José L. Ramírez-Colón, Xaimara Santiago-Maldonado, Simara Laboy-López, Pedro O. Méndez Fernández, Marielys Torres-Díaz, José A. Lasalde-Ramírez, Liz M. Díaz-Vázquez, and Eduardo Nicolau. **Porous Cellulose Acetate/Block Copolymer Membranes for the Recovery of Polyphenolic Compounds from Aquatic Environments** *ACS Omega* 2022 7 (3), 2774-2785 DOI: 10.1021/acsomega.1c04327
8. Perla Cruz-Tato, Tra-My Justine Richardson, Jaione Romero-Mangado, Michael Flynn, and Eduardo Nicolau. **Performance Evaluation of 1-Cyclohexylpiperidine as a Draw Solute for Forward Osmosis Water Separation and CO2 Recovery** *ACS Omega* 2020 5 (40), 25919-25926 DOI: 10.1021/acsomega.0c03301
9. Ortiz-Gómez V, Rodríguez-Ramos V, Maldonado-Hernández R, González-Feliciano J, Nicolau E. **Antimicrobial Polymer-Peptide Conjugates Based on Maximin H5 and PEG to Prevent Biofouling of E. coli and P. aeruginosa.** *ACS Applied Materials & Interfaces.* 2020 September 16; 12(41):46991-47001
10. Cruz-Tato P, Rivera-Fuentes N, Flynn M, Nicolau E. **Anti-Fouling Electroconductive Forward Osmosis Membranes: Electrochemical and Chemical Properties.** *ACS Applied Polymer Materials.* 2019 April 16; 1(5):1061-1070
11. Santiago-Martoral L, Figueroa A, Nicolau E. **Lyotropic Liquid Crystal-Based Membranes for Water Remediation: Fabrication, Characterization and Performance Evaluation.** *ACS Omega.* 2020 July 20; 5(29):17940-17946.

12. Penabad, L; Herrera, J., Btancourt, M. and E. Nicolau, **Cellulose acetate/P4VP-b-PEO membranes for the adsorption of electron deficient pharmaceutical compounds** *ACS Omega*, **2019**, *4*, 27, 22456-22463
13. Pazol, J., A. Vázquez, and E. Nicolau, **Characterization of non-covalent immobilized *Candida antarctica* lipase b over PS-b-P4VP as a model bio-reactive porous interface.** *Colloids and Surfaces B: Biointerfaces*, **2019**: 183 p. 110418.
14. Santillán, J.; Nicolau, E., **Fabrication and Evaluation of Polycaprolactone Beads-on-string Membranes for Applications in Bone Tissue Regeneration**, *ACS Appl. Bio Mater.*, **2019**, *2* (3), pp 1031–1040
15. Alvarez-Sanchez, CO, Lasalde-Ramírez, JA, Ortiz-Quiles, EO, Massó-Ferret, R, Nicolau, E. **Polymer-MTiO₃(M = Ca, Sr, Ba) composites as facile and scalable supercapacitor separators.** *Energy Sci Eng.* **2019**; 00: 1– 11. <https://doi.org/10.1002/ese3.299>
16. Herrera-Morales, J.; Nicolau, E., **Nanocellulose-block copolymer films for the removal of emerging organic contaminants from aqueous solutions**, *Materials* **2019**, *12*(2), 230; <https://doi.org/10.3390/ma12020230>
17. Cruz-Tato, P.; Nicolau, E., **Anti-fouling electroconductive forward osmosis membranes: electrochemical and chemical properties"**, *ACS Appl. Polym. Mater.*, **2019**, *1* (5), pp 1061–1070
18. Vega, K.; Nicolau, E., **Aptamer-based Sensor for Impedimetric Assay of Arsenite in Water: Fundamental Aspects and Performance**, *ACS Omega*, **2018**
19. Herrera, J.; Nicolau, E., **Examining the use of nanocellulose composites for the sorption of contaminants of emerging concern: A computational and experimental study.** *ACS OMEGA*. **2017**; *2* (11), pp 7714–7722
20. Cruz-Tato P, Ortiz-Quiles E, Vega-Figueroa K, Santiago-Martoral Liz, Flynn M, Díaz-Vázquez L, Nicolau E.* **Metalized Nanocellulose Composites as a Feasible Material for Membrane Supports: Design and Applications for Water Treatment.** *ACS Environmental Science & Technology*. **2017**; *51*(8):4585-4595
21. Vega-Figueroa K, Santillán J, García C, González-Feliciano J, Bello S, Rodríguez Y, Ortiz-Quiles E, Nicolau E. **Assessing the Suitability of Cellulose-Nanodiamond Composite As a Multifunctional Biointerface Material for Bone Tissue Regeneration.** *ACS Biomaterials Science & Engineering*. **2017**(DOI: 10.1021/acsbiomaterials.7b00026)
22. Herdocia-Lluberes, C. S.; Laboy-López, S.; Morales, S.; Gonzalez-Robles, T. J.; González-Feliciano, J. A.; Nicolau, E., **Evaluation of Synthesized Nanohydroxyapatite-Nanocellulose Composites as Biocompatible Scaffolds for Applications in Bone Tissue Engineering.** *Journal of Nanomaterials* **2015**, *2015*, 9.
23. E. Nicolau, J.A. Rodriguez-Martinez, J. Richardson, M. Flynn, K. Griebenow and C.R. Cabrera “Externally interfaced urea electrochemical bioreactor at forward osmosis/reverse osmosis subsystem for energy and waste recovery in water recycling” *ACS Sustainable Chem. Eng.*, **2014**, *2* (4), pp 749–754.
24. E. Nicolau, J. Fonseca, and C.R. Cabrera “Development of a urea bioprobe based on platinumized boron-doped diamond electrodes” *Electroanalysis* **2012**, *24*, 2102-2108._

25. E. You, R. Guzman-Blas, E. Nicolau, M.A. Scibioh, J. Watkins and C.R. Cabrera, “Co-Deposition of Pt and Ceria Anode Catalyst in Supercritical Carbon Dioxide for Direct Methanol Fuel Cell Applications” *Electrochimica Acta* **2012**, 75, 191-200
26. E. Nicolau, J. Fonseca, C. Vu, J. Richardson, M. Flynn, and C.R. Cabrera “Evaluation of granulated activated carbons and carbon molecular sieves for removal of urea in urine: A water reclamation approach”. *International Conference in Environmental Systems* **2012**, AIAA 2012-3627
27. E. Nicolau, C.M. Poventud, J. Fonseca, L. Arroyo, M. Flynn, and C.R. Cabrera “Microgravity effects on the electrochemical oxidation of ammonia: A parabolic flight experiment” *Electrochim. Acta* **2012**, 75, 88-93
28. E. Nicolau, J. Mendez, K. Griebenow and C.R. Cabrera “Bioelectrochemistry of non-covalent immobilized alcohol dehydrogenase on oxidized diamond nanoparticles” *Bioelectrochemistry*. **2012**, 85, 1-6
29. I. Gonzalez-Gonzalez, Y. Hernandez, E. Nicolau and C.R. Cabrera “Ammonia Oxidation Enhancement at Square-Wave Treated Platinum Particle Modified Boron-Doped Diamond Electrodes” *ECS Transactions*. **2010**, 33, (1), 201-209
30. E. Nicolau, J.A. Rodriguez-Martinez, J. Fonseca, J. Richardson, M. Flynn, K. Griebenow and C.R. Cabrera “Bioelectrochemical Oxidation of Urea with Urease and Platinized Boron Doped Diamond Electrodes for Water Recycling in Space Applications”. *ECS Transactions*. **2010**, 33, (1), 1853-1859
31. E. Nicolau, I. Gonzalez-Gonzalez, K. Griebenow and C.R. Cabrera “Bioelectrochemical degradation of urea at platinized boron-doped diamond electrodes for bioregenerative systems”. *Advances in Space Research*. **2009**, 44, 965-970.