

Curriculum Vitae

Personal Information

Name: Kyriazis C. Rekos
Date-Place of birth: 03-11-1994, Giannitsa, Greece
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Education

- 2017-2019:** MSc in Chemical and Environmental Technology, Department of Chemistry, Aristotle University of Thessaloniki, Greece, *Dissertation:* Liquid fuel desulfurization: Effect of activated carbon surface chemistry on the adsorption capacity and catalytic oxidation of thiophenic compounds (9/10)
- 2012-2019:** BSc, Department of Chemistry, Aristotle University of Thessaloniki, Greece, *Dissertation:* Study of the removal of endocrine disruptors from aqueous solutions with the method of adsorption on activated carbon: Effect of surface modification on the adsorption capacity. (7.02/10.00)

Training

- 2016-2017:** License to practice the profession of Oenologist, Department of Chemistry, Aristotle University of Thessaloniki, Greece, 09/2016 - 07/2017
- 2017:** Quality Management Systems – "ISO 17025: 2005", Association of Greek Chemists, Thessaloniki, 04/2017

Research Experience

Characterization techniques

- UV-Vis spectrophotometry
- FT-IR spectroscopy
- X-ray diffraction spectroscopy (XRD)
- Nitrogen porosimetry (BET)
- Scanning Electron Microscopy (SEM) and SEM with Energy Dispersive Spectroscopy (SEM/EDS)

- High – Performance Liquid Chromatography (HPLC/UV-Vis, HPLC/PDA, HPLC/RID)
- Gas chromatography/Mass spectroscopy (GC, GC-MS)
- Boehme method
- Potentiometric titration

Laboratory techniques

- Pyrolysis and catalytic pyrolysis for lignocellulosic biomass, lignin and solid waste in laboratory and pilot scale reactors towards useful chemicals and fuels
- Catalytic conversion of lignocellulosic biomass towards chemicals and particularly to produce furanic compounds used in bio - polymers and epoxy resins.
- Adsorption and catalytic oxidation techniques, for the removal various organic pollutants (e.g., dyes, pharmaceutical compounds, and endocrine disruptors)
- Catalyst design (simple oxides, activated carbons, zeolites) and characterization
- Innovative porous materials preparation and characterization (graphite oxide, bio-char, etc.)
- Modification of porous materials

Work Experience

- 08/2019– 10/2020** Valorization of agricultural residues and food industries waste towards the production of value added chemicals and fuels”, in the project “INVALOR: Research Infrastructure for Waste Valorization and Sustainable Management, which is implemented under the Action “Reinforcement of the Research and Innovation Infrastructure”, funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020) and co-financed by Greece and the European Union (European Regional Development Fund), Budget for AUTH 274.712 €, Project Coordinator: Prof. A. Zouboulis
- 06/2020-10/2020** “Innovative (nano)composite bio-polymeric coatings for the protection and the upgrading of marbles”
- 08/2019-06/2020** “PyrolWaste: Application of the pyrolysis method in the management of industrial and hazardous waste”

Publications in international peer-reviewed journals

1. Liakos E. V., Rekos K., Giannakoudakis D. A., Mitropoulos A. C. & Kyzas G. Z. (2021), Carbonaceous Adsorbents Derived from Agricultural Sources for the Removal of Pramipexole Pharmaceutical Model Compound from Synthetic Aqueous Solutions, *Processes*, 9(2), 253. <https://doi.org/10.3390/pr9020253>

2. Liakos E. V., Rekos K., Giannakoudakis D. A., Mitropoulos A. C., Fu J. & Kyzas G. Z. (2021), Activated Porous Carbon Derived from Tea and Plane Tree Leaves Biomass for the Removal of Pharmaceutical Compounds from Wastewaters, *Antibiotics*, 10(1), 65.
<https://doi.org/10.3390/antibiotics10010065>
3. Rekos K., Kampouraki Z.-C., Panou C., Baspanelou A., Triantafyllidis K., & Deliyanni E. (2020), Adsorption of DBT and 4,6-DMDBT on nanoporous activated carbons: the role of surface chemistry and the solvent, *Environmental Science and Pollution Research*.
<https://doi.org/10.1007/s11356-020-08242-0>
4. Rekos K., Kampouraki Z.-C., Sarafidis C., Samanidou V. & Deliyanni E. (2019), Graphene Oxide Based Magnetic Nanocomposites with Polymers as Effective Bisphenol–A Nanoadsorbents. *Materials*, 12(12), 1987. <https://doi.org/10.3390/ma12121987>
5. Saroyan H., Ntagiou D., Rekos K., & Deliyanni E. (2019), Reactive Black 5 Degradation on Manganese Oxides Supported on Sodium Hydroxide Modified Graphene Oxide, *Applied Sciences*, 9(10), 2167. <https://doi.org/10.3390/app9102167>

Conferences

2020:

1. Rekos K., Samanidou V., Triantafyllidis K. and Deliyanni E., (ORAL) “Desulphurization of liquid fuels: Effect of different parameters to the catalytic oxidation of 4,6-DMDBT”, 7th Environmental Conference of Macedonian, Aristotle University of Thessaloniki, Thessaloniki, Greece, November 2019
2. **Rekos K.**, Margellou A., Giliopoulos D. and Triantafyllidis K., (ORAL) “Selective fractionation of biomass and down-stream catalytic production of furans”, 2nd FUR4Sustain meeting, Aveiro, Portugal, March 2020
3. Triantafyllidis K., Margellou A., **Rekos K.**, Pappa C. and Fotopoulos A., (ORAL) “Valorization of lignin towards chemicals, fuels and polymers”, 2nd International Congress on Biorefineries and Renewable Energies (BERSTIC II), Bucaramanga, Colombia, February 2020
4. **Rekos K.**, Samanidou V., Triantafyllidis K. and Deliyanni E., (ORAL) “Desulfurization of fuels: Effect of various parameters to the catalytic oxidation of DBT and 4,6-DMDBT”, 3th Conference for under- and postgraduate students of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece, November 2019
5. Panou C., **Rekos K.**, Triantafyllidis K. and Deliyanni E., "Desulfurization of fuels: Effect of the solvent and the surface chemistry of the activated carbons to the adsorption capacity for the removal of 4,6-DMDBT", 3th Conference for under- and post-graduate students of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece, November 2019
6. Margellou A., **Rekos K.** and Triantafyllidis K. "Valorization of agricultural and food industry wastes towards the production of fuels and value-added chemicals", Invalor Scientific workshop, Chania, Crete Island, Greece, November 2019

7. Margellou A., **Rekos K.**, Pappa C. and Triantafyllidis K., (ORAL) “Hemicellulose and lignin biomass streams valorization via catalytic hydrogenation/hydrogenolysis reactions”, 6th Panhellenic Symposium - Green Chemistry and Sustainable Development, Athens, Greece, October 2019
8. Margellou A., **Rekos K.**, Pappa C., Fotopoulos A. and Triantafyllidis K., (ORAL) “«Integrated biorefinery» for lignocellulosic biomass valorization to fuels and chemicals”, 6th Panhellenic Symposium - Green Chemistry and Sustainable Development, Athens, Greece, October 2019
9. Mitsiakou E., Margellou A., **Rekos K.** and Triantafyllidis K., (ORAL) “Valorization of hemicellulose-biomass side streams via catalytic hydrogenation into value added chemicals and fuels”, 7th International Conference on Sustainable Solid Waste Management, Heraklion, Crete Island, Greece, June 2019
10. **Rekos K.**, Kampouraki Z.-C., Samanidou V. and Deliyanni E., “Magnetic graphene oxide-polymer Nanocomposites as sorbents for bisphenol A”, 17th International Conference on Chemistry and the Environment, Thessaloniki, Greece, June 2019
11. **Rekos K.**, Panou C., Triantafyllidis K. and Deliyanni E., “Activated carbons as adsorbates and as metal free catalysts in the oxidation of benzothiophenes for the desulfurization of fuels: the role of solvents”, 17th International Conference on Chemistry and the Environment, Thessaloniki, Greece, June 2019
12. **Rekos K.**, Kampouraki Z.-C., Samanidou V. and Deliyanni E., “Magnetic graphene oxide-polystyrene and magnetic activated carbon-polystyrene nanocomposites as sorbents for bisphenol A”, EGU General Assembly 2016, Vienna, Austria, April 2016

Personal Skills

- Languages
 - Greek (mother tongue)
 - English (Lower - University of Michigan, Level B2)
- Computer Skills
 - MS Office Suite (Word, Excel, PowerPoint, Internet), Origin Lab, ChemOffice, ChemDraw, SuperPro Designer, Adobe Photoshop, Adobe Illustrator

Technical Skills

- Methods for synthesis of materials: hydrothermal, co-precipitation, wet impregnation
- Scientific instruments: X-Ray Diffraction (XRD), N₂ Porosimeter, FTIR and UV spectrophotometer, Scanning Electron Microscope (SEM), Elemental Analysis (EDS), Titrator, Gas Chromatography (GC), Plug Flow Reactor (PFR)

Membership

- Association of Greek Chemists
- Association of Northern Greece's Chemists