

## CV Rita Giovannetti

- Since June 2021: Associate professor in Environmental Chemistry and and Cultural Heritage CHIM12, School of Science and Technology, University of Camerino
- 2002- 2021: Full-time Researcher, Assistant professor in Environmental Chemistry and and Cultural Heritage CHIM12, School of Science and Technology, University of Camerino.
- 1999-2001: Technical coordinator first special role, University of Camerino.
- 1993-1998: Technical Functionary level VIII, University of Camerino.
- 1991-1993: Technical Collaborator level VII, University of Camerino.
- 1989: Degree in Chemistry at University of Camerino.
  
- From 01/11/2011 to 31/10/2017 Delegate of the Rector for Safety, Prevention and Protection, University of Camerino.
- Participation in the Academic Board within the Research Doctorate in Chemical and Pharmaceutical Sciences and Biotechnology.
- Member of the Editorial Board of the Scientific Reports (<https://www.nature.com/srep/>)
- She is among the inventors of 4 patents.
- Author or co-author of 50 journal articles (IF: 18)

### Research Activities

The research activity of Rita Giovannetti, in the field of Environmental / Analytical Chemistry, is related to: environmental remediation; functional nanomaterials for environmental applications: dye sensitized solar cells, adsorption and photocatalysis to remove pollutants; nanochemistry for sensors or activators, characterization and application of porphyrins and natural dyes; water chemistry and water depuration; chemistry of water in CH<sub>4</sub>-CO<sub>2</sub> replacement of gas hydrates; chemistry in bioremediation and bioproducts, speciation of particular pollutants and analytes in different environmental matrices.

### Grants/Fundings

- **(EU) LIFE-MERCURY FREE - PROJECT ID: 101074412** -Complex Awareness Raising and Behaviour Change for the Mercury-Free City Environment LIFE-2021-SAP-ENV. Participant
- **Prin 2017-** Title: Methane recovery and carbon dioxide disposal in natural gas hydrate reservoirs. RU
- **FAR 2015-2017** -Unicam- NAMES Nanocomposite Materials for Energy and environment applications, University of Camerino. -Development of nano-semiconductor based on graphene material for water depuration by photocatalysis and solar cells, with the synthesis of reduced Graphene Oxide by green methodologies. Participant.
- **Research agreement CHIMEC S.p.A.:** "New products and technologies for the chemical treatment of petroleum fluids and industrial waters " .
- **Research agreement CHIMEC S.p.A.:** "The study of new technologies for the solution of corrosive phenomena and the formation of fouling in the oil and petrochemical industry".

### Publications in the last five years

1. D'Amato, C. A.; **Giovannetti, R.**; Zannotti, M.; Rommozzi, E.; Minicucci, M.; Gunnella, R.; Di Cicco, A., Band Gap Implications on Nano-TiO<sub>2</sub> Surface Modification with Ascorbic Acid for Visible Light-Active Polypropylene Coated Photocatalyst. *Nanomaterials* **2018**, 8 (8).
2. D'Amato, C. A.; **Giovannetti, R.**; Zannotti, M.; Rommozzi, E.; Ferraro, S.; Seghetti, C.; Minicucci, M.; Gunnella, R.; Di Cicco, A., Enhancement of visible-light photoactivity by polypropylene coated plasmonic Au/TiO<sub>2</sub> for dye degradation in water solution. *Applied Surface Science* **2018**, 441, 575-587.
3. Rommozzi, E.; Zannotti, M.; **Giovannetti, R.**; D'Amato, C. A.; Ferraro, S.; Minicucci, M.; Gunnella, R.; Di Cicco, A., Reduced Graphene Oxide/TiO<sub>2</sub> Nanocomposite: From Synthesis to Characterization for Efficient Visible Light Photocatalytic Applications. *Catalysts* **2018**, 8 (12).
4. Zannotti, M.; **Giovannetti, R.**; Minofar, B.; Řeha, D.; Plačková, L.; D'Amato, C. A.; Rommozzi, E.; Dudko, H. V.; Kari, N.; Minicucci, M., Aggregation and metal-complexation behaviour of THPP porphyrin in ethanol/water solutions as function of pH. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **2018**, 193, 235-248.

5. Zannotti, M.; Benazzi, E.; Stevens, L. A.; Minicucci, M.; Bruce, L.; Snape, C. E.; Gibson, E. A.; **Giovannetti, R.**, Reduced Graphene Oxide-NiO Photocathodes for p-Type Dye-Sensitized Solar Cells. *ACS Applied Energy Materials* **2019**, 2 (10), 7345-7353.
6. Gigliobianco, M. R.; Campisi, B.; Vargas Peregrina, D.; Censi, R.; Khamitova, G.; Angeloni, S.; Caprioli, G.; Zannotti, M.; Ferraro, S.; **Giovannetti, R.**; Angeloni, C.; Lupidi, G.; Pruccoli, L.; Tarozzi, A.; Voinovich, D.; Di Martino, P., Optimization of the Extraction from Spent Coffee Grounds Using the Desirability Approach. *Antioxidants* **2020**, 9 (5).
7. Kari, N.; Zannotti, M.; Mamtmin, G.; **Giovannetti, R.**; Minofar, B.; Řeha, D.; Maimaiti, P.; Kutilike, B.; Yimit, A., Substituent Effect on Porphyrin Film-Gas Interaction by Optical Waveguide: Spectrum Analysis and Molecular Dynamic Simulation. *Materials* **2020**, 13 (24).
8. Zannotti, M.; Rossi, A.; **Giovannetti, R.**, SERS Activity of Silver Nanosphere, Triangular Nanoplates, Hexagonal Nanoplates and Quasi-Spherical Nanoparticles: Effect of Shape and Morphology. *Coatings* **2020**, 10 (3).
9. Zannotti, M.; Vicomandi, V.; **Rossi, A.**; Minicucci, M.; Ferraro, S.; Petetta, L.; Giovannetti, R., Tuning of hydrogen peroxide etching during the synthesis of silver nanoparticles. An application of triangular nanoplates as plasmon sensors for Hg<sup>2+</sup> in aqueous solution. *Journal of Molecular Liquids* **2020**, 309, 113238.
10. Gambelli, A. M.; Tinivella, U.; **Giovannetti, R.**; Castellani, B.; Giustiniani, M.; Rossi, A.; Zannotti, M.; Rossi, F., Observation of the Main Natural Parameters Influencing the Formation of Gas Hydrates. *Energies* **2021**, 14 (7).
11. John, M. S.; Nagoth, J. A.; Zannotti, M.; **Giovannetti, R.**; Mancini, A.; Ramasamy, K. P.; Miceli, C.; Pucciarelli, S., Biogenic Synthesis of Copper Nanoparticles Using Bacterial Strains Isolated from an Antarctic Consortium Associated to a Psychrophilic Marine Ciliate: Characterization and Potential Application as Antimicrobial Agents. *Marine Drugs* **2021**, 19 (5).
12. Kari, N.; Zannotti, M.; **Giovannetti, R.**; Maimaiti, P.; Nizamidin, P.; Abliz, S.; Yimit, A., Sensing Behavior of Metal-Free Porphyrin and Zinc Phthalocyanine Thin Film towards Xylene-Styrene and HCl Vapors in Planar Optical Waveguide. *Nanomaterials* **2021**, 11 (7).
13. Kazim, S.; Gunnella, R.; Zannotti, M.; **Giovannetti, R.**; Klimczuk, T.; Ottaviano, L., Determination of the refractive index and wavelength-dependent optical properties of few-layer CrCl<sub>3</sub> within the Fresnel formalism. *Journal of Microscopy* **2021**, 283 (2), 145-150.
14. Rossi, A.; Zannotti, M.; Cuccioloni, M.; Minicucci, M.; Petetta, L.; Angeletti, M.; **Giovannetti, R.**, Silver Nanoparticle-Based Sensor for the Selective Detection of Nickel Ions. *Nanomaterials* **2021**, 11 (7).
15. Scortichini, S.; Appignanesi, D.; Zannotti, M.; D'Amato, C. A.; Lenti, L.; Maggi, F.; Ferraro, S.; Fiorini, D.; **Giovannetti, R.**, Fatty acid composition, squalene and elements in apple by-products: comparison between ancient cultivars and commercial varieties. *European Food Research and Technology* **2022**.
16. Kari, N.; Zannotti, M.; **Giovannetti, R.**; Řeha, D.; Minofar, B.; Abliz, S.; Yimit, A., Metallic Effects on p-Hydroxyphenyl Porphyrin Thin-Film-Based Planar Optical Waveguide Gas Sensor: Experimental and Computational Studies. *Nanomaterials* **2022**, 12 (6).
17. **Giovannetti, R.**; Gambelli, A. M.; Castellani, B.; Rossi, A.; Minicucci, M.; Zannotti, M.; Li, Y.; Rossi, F. May sediments affect the inhibiting properties of NaCl on CH<sub>4</sub> and CO<sub>2</sub> hydrates formation? an experimental report *J. Mol. Liquids* **2022**, 359, 119300.
18. **Giovannetti, R.**; Gambelli, A. M.; Rossi, A.; Castellani, B.; Minicucci, M.; Zannotti, M.; Nicolini, A.; Rossi, F. Thermodynamic assessment and microscale Raman spectroscopy of binary CO<sub>2</sub>/CH<sub>4</sub> hydrates produced during replacement applications in natural reservoirs *Journal of Molecular Liquids*, **2022**, 368, 120739.
19. Rossi, A.; Cuccioloni, M.; Magnaghi, L. R.; Biesuz, R.; Zannotti, M.; Petetta, L.; Angeletti, M.; **Giovannetti, R.** Optimizing the Heavy Metal Ion Sensing Properties of Functionalized Silver Nanoparticles: The Role of Surface Coating Density *Chemosensors* **2022**, 10(11), 483