

Tzachristas Andreas

Title: Collaborative Teaching Staff (Assistant Lecturer) / Junior in Chinese system

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Dr. Andreas Tzachristas graduated in 2016 from the Department of Chemistry University of Patras and in 2018 completed his master's degree in the same department specializing in 'Analytical Environmental Chemistry'. In 2022 he completed his PhD thesis at the Department of Chemical Engineering of University of Patras with the subject of: Investigation of the effect of wettability on salt precipitation in porous media. From 2022 he is employed as a postdoctoral researcher in the Chemical Engineering Department of the University of Patras. His research focus on Scale Formation and Prevention in Industrial Processes, Nucleation and Crystal growth of insoluble salts in microchips, Purification of water and wastewater using biochars and biomaterials, Extraction, and Isolation of organic compounds from byproducts. He has served as a teaching assistant in Analytical Chemistry Laboratory undergraduate course for three years in Department of Chemical Engineering and for two years in Department of Chemistry (University of Patras), and co-supervised (12) diploma theses. He has totally over 5 years' experience in teaching and research.

He has participated in 7 National Conferences and in 10 International Conferences, with publications in Conferences Proceedings, so far. Indicative orals and poster presentations presented below:

Indicative orals and poster presentations presented.

1. Michalopoulou C., Stefanou C., Tzachristas A., P.G. Koutsoukos, Paraskeva C.A., Sygouni V., (2023), Microfluidic visualization experiments of calcium carbonate in the presence of surfactants, In 2nd International Conference on Physical Chemistry and Spectroscopy, 27-29 September 2023, Patras, Greece.
2. Karapanagioti H.K, Mourgkogiannis N., Tzachristas A., Yeo B.G., Alidoust M., Takada H., (2023), PCBs measured in plastic pellets from different beaches in Saronikos Gulf, Greece, In 18th International Conference on Environmental Science and Technology, 30 August - 2 September 2023, Athens, Greece.
3. Yeo B.G., Alidoust., Mourgkogiannis N., Tzachristas A., Karapanagioti H.K., Takada H., (2022) Spatial and temporal profiles of PCBs concentrations in plastic pellets found on different beaches in Saronikos Gulf, Greece, In 7th International Marine Debris Conference, 18-23 September 2022, Busan, S. Korea.

4. Tzachristas A., Malamoudis R.E., Kanellopoulou D.G., Parthenios J., P.G. Koutsoukos, Paraskeva C.A., Sygouni V., (2021), Scale Formation and Wetting of Surfaces: A Microfluidics Investigation, NACCE 2021, April.
5. Tzachristas A., Tzepkinli V., Manariotis I.D., Karapanagioti H.K. (2019), Removal of chloroform from water and wastewater using various sorbents, EGU European Geoscience Union General Assembly 2019, April 7-12, Vienna, SSS8.7, Vol. 21, EGU2019-8532-1.
6. Tzachristas A., Malamoudis R.E., Kanellopoulou D.G., Parthenios J., Koutsoukos P.G., Paraskeva C.A., Sygouni V., (2019), Visualization experiments of salt precipitation in homogeneously wet microchannels, EGU European Geoscience Union General Assembly 2019, April 7-12, Vienna, Vol.21, EGU2019-8687-1.
7. Tzachristas A., Papanikolaou P., Tzepkinli V., Manariotis I.D., Karapanagioti H.K. (2018), Biochars made from agro-industrial byproducts remove chlorine and chlorination by-product (chloroform) from water and wastewater. EGU European Geoscience Union General Assembly 2018, 8-13 Vienna, SSS8.7, Vol.20, EGU2018-10457

Selected publications in Peer-Reviewed Journals are presented below:

1. " Decreasing Drinking Water Toxicity by Chlorine Removal Using Activated Carbons, Biomaterials and Biochars from Agro-industrial By-products " Tzachristas Andreas, Manariotis Ioannis D, Dailianis Stefanos, Karapanagioti Hrisi K, under review.
2. "Microfluidic Investigation of Calcium Carbonate Scale Formation in the Presence of Anionic Surfactant Aerosol OT", Tzachristas Andreas, Kanellopoulou Dimitra, Youssef Souhail, Vizika-Kavvadias Olga, Koutsoukos Petros, Paraskeva Christakis, and Varvara Sygouni, Energy & fuels. <https://doi.org/10.1021/acs.energyfuels.3c00574>
3. "The effect of surface wettability on calcium carbonate precipitation in packed beds", Tzachristas Andreas, Kanellopoulou Dimitra, Koutsoukos Petros, Paraskeva Christakis, Sygouni Varvara, Surfaces and Interfaces <https://www.sciencedirect.com/science/article/pii/S2468023022006150>
4. "Mineral scaling in the presence of oil/water interfaces combined with substrate's wettability effect: from batch to microfluidic experiment", Tzachristas Andreas, Natsi Panagiota, Kanellopoulou Dimitra, Parthenios John, Koutsoukos Petros, Paraskeva Christakis, Sygouni Varvara, Industrial & Engineering Chemistry Research. <https://doi.org/10.1021/acs.iecr.1c00804>
5. "Mineral Scaling in Microchips: Effect of Substrate Wettability on CaCO₃ Precipitation", Tzachristas Andreas, Malamoudis Roxanne-Irene, Kanellopoulou Dimitra, Skouras Eugene, Parthenios John, Koutsoukos Petros, Paraskeva Christakis, Sygouni Varvara, Industrial & Engineering Chemistry Research. <https://doi.org/10.1021/acs.iecr.0c03936>