

PhD Candidate Profile

Name:

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Department

Department of Civil Engineering

College:

University of Salerno

Supervisor(s):

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Funding body:

European social fund, Action I.1 “Innovative and industrial doctorate”, Italian Ministry of University and Research (MIUR)

Area (field) of study:

Environmental Engineering

Thesis Title:

Tertiary treatment of urban wastewater: advanced oxidation Vs consolidated processes

Abstract:

The release into the environment of micro-contaminants (also known as contaminants of emerging concern, CECs) from point sources, such as wastewater treatment plants, is resulting in an increasing concern for human health and the environment due to their possible toxic effects. As matter of fact, consolidated tertiary treatments either did not show to be effective in the removal of CECs or did result in some drawbacks (e.g., formation of disinfection by products). Due to their efficiency in the removal of CECs and inactivation of pathogens, because of the formation of reactive oxygen species (such as hydroxyl radicals), advanced oxidation processes (AOPs) represent a possible alternative to conventional tertiary treatments. In this thesis work, new photo driven AOPs will be investigated in the removal of CECs from urban wastewater and compared with more consolidated processes and technologies. Thesis research activity will be developed in collaboration with Plataforma Solar de Almeria (Spain) and Montagna company (Milan, Italy), where secondments are respectively scheduled.

Publications:

Elizaryev, A., **Maniakova, G.**, Longobardi, A., Elizareva, E., Gabdulkhakov, R., Nurutdinov, A., Khakimov, R. (2018) Numerical simulation of oil spills based on the GNOME and ADIOS International Journal of Engineering and Technology(UAE), 7 (2), pp. 24-27.

