Program	**Program Nucleu, contract 20N/2019, project code: PN 19 04 03 01**
Project title (ENG):	Advanced materials, methods and technologies applied in water/wastewater treatment
Project title (RO):	Materiale, metode si tehnologii avansate cu aplicatii in tratarea / epurarea apelor
Duration	Iulie 2019 – Decembrie 2019
Team Leader	Lucian Alexandru Constantin
Summary (short description) ENG	Performed activities are presented within four research studies., as follows: • Research study in enzymes use in water treatment • Research study on present advanced oxidation processes applied for organic pollutants degradation • Research study on reuse of vegetal waste as materials with adsorbent properties for wastewater treatment • Research study on the assessment of wastewater treatment plants biological step configuration,, operational parameters and activated sludge properties The research results were used for the development of three new project proposals within national calls in the following areas: • Lab scale hybrid technology photocatalysis – membrane processes for the advanced degradation of pharmaceutical products from water • Membrane based and enzymatic processes for separation of organic compounds from wastewater generated by dairy industry and their reuse as value added products • Environmental bioremediation through innovative technology based on metals bio recycling using plants
Summary (short description) RO	Activitatile realizate sunt prezentate in cadrul a patru studii de cercetare dupa cum urmeaza: • Studiu de cercetare privind stadiul utilizarii enzimelor in tratarea apelor • Studiu de cercetare privind stadiul actual al aplicarii proceselor de oxidare avansata in degradarea poluantilor organici • Studiu de cercetare privind valorificarea deseurilor vegetale in materiale cu proprietati adsorbante cu aplicatii in epurarea apelor • Studiu de cercetare privind evaluarea configuratiei, parametrilor de operare si a caracteristicilor namolului activ din treapta biologica a statiei de epurare Rezultatele cercetarilor realizate in cadrul proiectului au stat la baza dezvoltarii a trei propuneri de proiecte in cadrul competitiilor nationale in urmatoarele domenii: • Tehnologie hibrid la nivel de laborator fotocataliza – procese membranare pentru degradarea avansata a produselor farmaceutice din sisteme apoase

	• Procedee membranare si enzimatice pentru separarea compusilor organici din apele reziduale generate de industria laptelui si obtinerea de produse cu valoare adaugata ridicata • Bioremedierea mediului inconjurator printr-o tehnologie inovatoare bazata pe bioreciclarea metalelor cu plante
Dissemination of results	
Full-paper ISI	*Comparative experimental study on an endocrine disruptor degradation by UV/H_2O_2 and UV/H_2O_2/TiO_2 systems*, Lucian Alexandru Constantin, Mirela Alina Constantin, Ines Nitoi, Florentina Laura Chiriac, Toma Galaon, Revista de Chimie (Bucharest), Registration number: 514, article sent for review and publication
Conferences (platform, poster, abstract / full-paper)	*Screening experiments on flutamide degradation via TiO_2 assisted photocatalyse*, Lucian Alexandru Constantin, Mirela Alina Constantin, Ines Nitoi, Toma Galaon, Ionut Cristea, 22nd International Symposium „The Environment and the Industry", SIMI 2019, 26-27 September 2019, Bucharest, Book of Abstracts, ISSN-L: 1843-5831, pg. 44-45, 2019, DOI: 10.21698/simi2019.ab15.
	Cellulosic material derived from maize stalk for Cu(II) and Fe(III) removal, Nicoleta Mirela Marin, Gheorghe Batrinescu, Lucian Constantin, Larentiu Dinu, Gina Traistaru, Mihai Nita-Lazar, Luoana Florentina Pascu, Carol Blaziu Lehr, 22nd International Symposium „The Environment and the Industry", SIMI 2019, 26-27 September 2019, Bucharest, Book of Abstracts, ISSN-L: 1843-5831, pg. 44-45, 2019, DOI: 10.21698/simi2019.ab02.