International Water Research Center

Volume 1, Issue 2
DECEMBER 2012

Where Ideas Flow

NIREAS-IWRC Times

Dr. Despo Fatta-Kassinos receives the *'2011 Nikos Symeonides Research Award'*

Dr. Despo Fatta-Kassinos, the NIREAS-IWRC Director, on 3 October 2012 received the '*2011 Nikos Symeonides Research Award*' from the Cyprus Research Promotion Foundation, in recognition of her outstanding research achievements and for the project "Development and application of innovative advanced chemical oxidation processes for the removal of xenobiotic compounds from sewage and assessment of their biological potency".

The Evaluation Committee, chose as prevalent this proposal based on the quality of the research project, the published research work, the development and exploitation of results and the overall research presence.

This award is a great honor for both Dr. Fatta-Kassinos and NIREAS-IWRC, highlighting the high level of research conducted by her and the NIREAS-IWRC staff. [MORE DETAILS]

Prof. Dionysios (Dion) Dionysiou receives the Tufts University Graduate School Alumni Outstanding Career Achievement Award (2012)

Prof. Dionysiou received the Tufts University Graduate School Alumni Outstanding Career Achievement Award (2012). He also received the University of Cincinnati College of Engineering and Applied Science Distinguished Engineering Researcher Award (2012) for the third time. Prof. Dionysiou was reappointed to continue his service and editor of Chemical Engineering Journal (Elsevier), Editor of the Journal of Advanced Oxidation Technologies, and Special Issue Editor and Associate Editor for the Journal of Environmental Engineering (ASCE). He also continues his service as member of the editorial board of 10 other journals in the fields of water quality, environmental nanotechnology, environmental chemistry and environmental engineering. [MORE DETAILS]

Two NIREAS-IWRC articles receive top scientific honors for being among the most-cited

Two of NIREAS-IWRC's recent scientific articles have received top scientific recognition, by being among the most-cited articles. The first, a paper by Ms. M. Klavarioti, Dr. D. Mantzavinos and Dr. D. Fatta-Kassinos titled "*Removal of residual pharmaceuticals from aqueous systems by advanced oxidation processes*", has been **listed among the top 10 most-cited articles of all time**, published on Scopus in the field of Environmental Sciences and Technology. [MORE DETAILS]

The second, Dr. Despo Fatta-Kassinos *et al.*'s, manuscript "Pharmaceutical residues in environmental waters and wastewater: current state of knowledge and future research", has been listed as No. 1 among the **top 10 most-cited articles published in 2011** in 'Analytical and Bioanalytical Chemistry' (ABC). ABC (Springer) is among the top 7 journals in analytical chemistry. [MORE DETAILS].

Dr. Costas Michael joins the Editorial Board of the Environmental Science and Pollution Research Journal (Springer)

Dr. Michael has been recently appointed as a member of the Editorial Board of Springer's Environmental Science and Pollution Research Journal (ESPR). ESPR serves the international community in all areas of Environmental Science and related subjects with emphasis on chemical compounds. It reports from a broad interdisciplinary outlook. The journal's impact factor for 2011 was 2.651. [MORE DETAILS]

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Dr. Despo Fatta-Kassinos receives the *'2011 Nikos Symeonides Research* Award'. The award, the highest national distinction granted to a researcher, is a point of reference for NIREAS-IWRC, its staff and its research work.

It should be noted that the *'2010 Nikos Symeonides Research Award'* was awarded to Dr. Stavros Kassinos, another NIREAS-IWRC Board of Directors' member.

Congrats to both!!!!!

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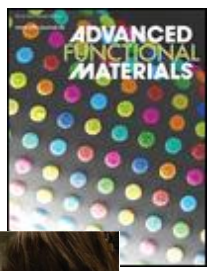
Dr. Despo Fatta-Kassinos becomes the Editor of the Journal of Environmental Chemical Engineering (Elsevier)

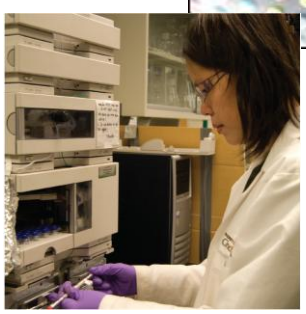
Dr. Fatta-Kassinos becomes the Editor of Elsevier's *Journal of Environmental Chemical Engineering*. The Journal provides a forum for the publication of original research on the development of alternative sustainable technologies focusing on water and wastewater treatment and reuse; treatment, reuse and disposal of waste; pollution prevention; sustainability and environmental safety; recent developments on green chemistry; alternative methods of remediation of environmental accidents including but not limited to oil spills in water bodies and nuclear accidents. [MORE DETAILS]

2012 has been a stellar year for Dr. Dionysiou's Nireas-IWRC research group at the University of Cincinnati (USA)



Professor Dionysiou, one of the Directors of NIREAS-IWRC, and his research team at the University of Cincinnati, continued their international efforts for collaborative research and for promotion of scientific activities associated with the center's mission. The group, including in collaboration with other members of NIREAS-IWRC, published several articles on the destruction and sensing of emerging contaminants in high profile journals and **received more than 900 citations in 2012 alone**.

- A paper by Changseok Han, a Ph.D. student in Dionysiou's group, titled "A Multi-Walled Carbon Nanotube-Based Biosensor for Monitoring the Cyanotoxin Microcystin-LR" was accepted in Advanced Functional Materials (first online published on Nov. 9. 2012), a high impact factor journal (2011 Impact factor: 10.179). [MORE DETAILS]
- A study by Xuexiang He, another Ph.D. student in Dionysiou's group, titled "Destruction of Cyanobacterial Toxin Cylindrospermopsin by Hydroxyl Radicals and Sulfate Radicals Using UV-254 nm Activation of Hydrogen Peroxide, Persulfate and Peroxymonosulfate" was accepted in the Journal of Photochemistry and Photobiology. For her studies, Xuexiang was awarded the 2012 Graduate Student Research Paper Award from the Division of Environmental Chemistry (ENVR) of American Chemical Society; this is the highest student award given by ENVR/ACS division. Xuexiang was also awarded the 2012 Dissertation Completion Fellowship Award in Physical Sciences and Engineering at the University of Cincinnati (only one annual award in the area of Physical Sciences and Engineering). [MORE DETAILS]



AMR prototype in pilot-implementation phase

NIREAS-IWRC's AMR project reports a major milestone in its progress to-date: The successful manufacturing of the first fully-designed by Cypriot firms printed circuit board (PCB) for automatic water-meter reading. The AMR device (which works as an add-on to existing water meters) is expected to help monitor water consumption in real-time and reduce the volume of unaccounted-for water in water distribution networks, at a price significantly lower than other technologies which require a complete overhaul of the water meters. The research project is lead by Dr. Christodoulou and the NIREAS's *Eupalinos Construction Engineering and Water Networks Management Laboratory*. [MORE DETAILS]

Snapshots of the developed PCB for automatic meter reading (AMR)

NIREAS-IWRC participates in the 2012 HeadShave Challenge

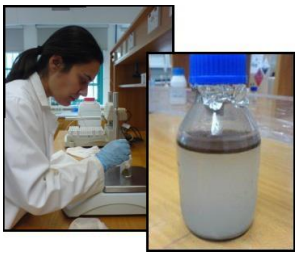
NIREAS-IWRC participates in this year's HeadShave Challenge (20.09.2012). The event is held by the Center for the Study of Haematological Malignancies, in support of the fight against leukemia. Through this activity, teams of volunteers, with a gesture of compassion and support towards the children suffering from leukemia, compete to raise the largest amount of funds. The teams may represent organizations, schools, departments, sports teams or even a family or an individual. [MORE DETAILS]

NIREAS-IWRC members participating in the "2012 Headshave Challenge"

NIREAS-IWRC (SRL - Subsurface Research Laboratory) provides professional expertise on soil decontamination to the Municipality of Larnaca.

The expertise of NIREAS-IWRC's staff on soil decontamination was recently utilized by the Larnaca Municipality which sought the assistance of the Soil Remediation Laboratory (SRL) to identify potential subsoil pollution due to an oil leak at a locale in Larnaca.

The team of NIREAS-IWRC's Soil Remediation Laboratory, composed of Prof. Constantinos Kostarelou, Dr. Marinos Stylianou and Ms. Iphigenia Gabriel, have participated in the exploratory drill, on-site sampling and off-site chemical analysis, identifying/measuring the levels of pollution and reporting on possible remediation measures. [MORE DETAILS]



Work at the SRL pertaining to the soil decontamination efforts at the outset of the oil leak in Larnaca.

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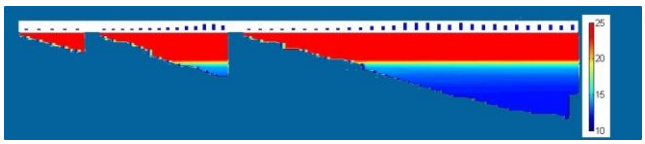
The MEDOLICO project moves to the 2nd year of implementation

The project seeks to prevent and reduce the environmental risk presented by Olive Mill Wastewater (OMW) by collaborating on the evaluation of the performance of various promising OMW treatment technologies and developing uniform treatment procedures according to the sought purpose (water for irrigation, recycling into the olive mill manufacturing process, etc.), which will then be pilot tested. There will be a further evaluation of the potential for valorization of the collected by-products so that a solution can be provided that sustainably protect the environment heritage of the Mediterranean regions while remaining cost-efficient for the olive mills. The project is funded by the European Neighborhood and Partnership Instrument (ENPI) in the framework of the cross-border cooperation programme for the Mediterranean Sea Basin. [MORE DETAILS]

NIREAS-IWRC expands its computing capacity with the acquisition of 800 additional cores for its computer cluster

A new cluster became operational in October 2012, consisting of 800 cores and 1.6 Terrabytes of distributed memory. The new machine will be used in conjunction with the existing clusters to model computationally complex problems, such as the hydrological modeling of dams to study evapotranspiration, and the modeling of salt intrusion of coastal aquifers. [MORE DETAILS]



Kouris Dam Hydrological Model: computed temperature distribution and evaporation rate

In the meantime, UCY-CompSci continues to operate three other machines featuring a previous generation compute cores (2008). These older machines are used mostly for teaching and training of students and researchers in parallel computing. [MORE DETAILS]

NIREAS-IWRC to participate in the EU-funded project "SFERA"

NIREAS-IWRC will participate in the research project entitled "Antibiotic resistance removal and disinfection potential of urban wastewater by solar-Fenton at a pilot plant scale". This project is funded by the European Commission under SFERA (Solar Facilities for the European Research Area) program, and aims at strengthening the scientific cooperation between European research institutes regarding the utilization and use of solar power. [MORE DETAILS]

NIREAS-IWRC researcher seconded to the Technical University of Crete for collaborative work on the treatment of raw winery wastewater

Ph.D. student Lida Ioannou was seconded to the Technical University of Crete for investigating the efficiency of a pilot scale reverse osmosis (RO) process on the treatment of raw winery wastewater, in single pass and in recirculation mode. [MORE DETAILS]

Spreading the 'NIREAS-IWRC word' across the globe...

Year 2012 has been a very active year in terms of disseminating NIREAS-IWRC's activities across the globe. NIREAS-IWRC researchers have presented their research at numerous scientific conferences and workshops and NIREAS-IWRC has hosted in Cyprus several international researchers. Among the places presented at: Moscow, Dead Sea, San Sebastian, Amsterdam, Catania, Brussels, Hong Kong, Heidenberg, Berlin, Chania, Bucharest, Rome, Oslo, Lisbon, Porto and Almeria. Dr. Dionysiou presented work associated with his collaborative work with NIREAS-IWRC in several international conferences, including plenary, keynote or invited lecture presentations in Korea, China, Portugal, Spain, Czech Republic, Pakistan, USA, Greece, and Cyprus. Visiting Cyprus were, among others, researchers from France, Portugal, Switzerland, Austria, Poland, Turkey, Finland, Germany, United Kingdom, Israel, Italy, Slovakia, Czech Republic, Serbia, Norway, Estonia, Australia, United States, Spain, Hungary, and Greece.

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Agenda

26.01.2013	Participation at an 'Open Day' event for high-school students, at the University of Cyprus
15.02.2013	NIREAS-IWRC Progress report submittal to the Cyprus Research Promotion Foundation
31.03.2013	Conclusion of the UCyAMR project
01.09.2013	NIREAS-IWRC Board of Directors and International Scientific Advisory Board meeting
28.09.2013	Researchers' night 2013

Newsbrief

Dec. 2012 Ms. Marlen Ines Vasquez Hadjilyra, a NIREAS-IWRC researcher, has successfully completed her PhD. Dr. Hadjilyra has, since Sep. 2012, joined the teaching staff of the Technical University of Cyprus. Congrats to Marlen!

Nov. 2012 NIREAS-IWRC presents its spatio-temporal analysis results on Cyprus's urban water distribution networks performance during the intermittent water supply policy period of 2008-2009.

Sep. 2012 NIREAS-IWRC staff actively participates in the "LIFE+ (2007-2013)" Call for Research Proposals, submitting a total of 6 proposals on topics ranging from wastewater management, to water resources, water quality, soil remediation, public awareness and water distribution networks.

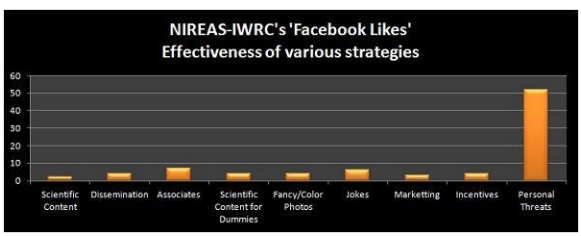
Sep. 2012 NIREAS-IWRC held its first international Scientific Advisory Board (SAB) meeting in Pissouri [MORE DETAILS].

The SAB meeting was held in tandem with the COST/NORMAN Conference on "Wastewater Reuse Applications and Contaminants of Emerging Concern". [MORE DETAILS]

Sep. 2012 NIREAS-IWRC held its annual Board of Directors (BOD) meeting. The BOD meeting reviewed issues pertaining to the Center's progress to-date and its strategic plan, in light of the review feedback from the Cyprus Research Promotion Foundation.

Sep. 2012 Dr. C. Michael joins NIREAS-IWRC's Board of Directors. Dr. Michael Dr. Michael is a member of GAIA- Laboratory of Environmental Engineering, and former director of the Cyprus State General Laboratory.

The NIREAS-IWRC 'When Ideas Flow' speaker series for the second half of 2012 was successfully completed. Four distinguished speakers presented a variety of water-related research topics, to an average audience-attendance of about 30 people per seminar. [MORE DETAILS]



NIREAS-IWRC staff announces the results of a statistical study on the effectiveness of various methods in attracting new 'Facebook Likes' to their *facebook* page.

Thanks to all of you for following us on *facebook*, even if only after direct personal threats to you! Thanks!

[MORE 'LIKES']

Previous Issue's Highlights

NIREAS-IWRC linked to the Cyprus Presidency of the Council of Europe [MORE DETAILS]

Workshop (13-14.09.2012): Wastewater Reuse Applications and Contaminants of Emerging Concern [MORE DETAILS]

NIREAS-IWRC issues preliminary results of a spatio-temporal analysis for Lefkosia's and Lemesos's piping networks [MORE DETAILS]

NIREAS-IWRC (Gaia Laboratory of Environmental Engineering) is granted a new EU research project [MORE DETAILS]

Dr. Despo Fatta-Kassinos joins the governing Scientific and Technological Board (STB) of the Joint Programming Initiative 'Water Challenges for a Challenging World' [MORE DETAILS]

Mr. Agathoklis Agathokleous (a NIREAS-IWRC doctoral student) was selected to participate in the ESF Junior Summit (Water: Unite and Divide) [MORE DETAILS]

Research Promotion Foundation
ΔΕΣΜΗ 2008

The NIREAS International Water Research Center is co-financed by the European Regional Development Fund and the Republic of Cyprus through the Cyprus Research Promotion Foundation (DESMI 2008)

Questions or comments? E-mail us at nireas-iwrc@ucy.ac.cy or call +357-2289 3512