

NEREUS COST ACTION ES1403 - NEWSLETTER

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RELEASE DATE: 09.NOVEMBER.2016



NEREUS
Next meeting



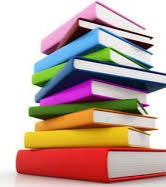
Short Term Scientific
Missions (STSMs) Call



WIKIPEDIA
The Free Encyclopedia
Wastewater Reuse
Wikipedia Article



Call for Abstracts



New publications



The Blue Circle Society
Bulletin

Next Meeting of NEREUS COST Action ES1403



The next Management Committee and Working Groups meeting will take place in **Patras, Greece** on **22-23 March 2017**. The meeting will be hosted by the Hellenic Open University and Prof. Ioannis Kalavrouziotis. It is noted that the 22nd of March is celebrated as the World Water Day.

Open Call for Short Term Scientific Missions (STSMs)

We are pleased to inform you that you are now able to submit proposals for Short Time Scientific Missions (STSMs) between **December 2016 - April 2017**.

STSMs to be approved: 3

The deadline for this call is 25 November 2016. All proposals will be reviewed by our STSM committee and the results will be announced by 30 November 2016. Please note that all proposals must be in line and relevant with the MoU and the Action Working Group Activities. The titles of the WGs are given below.

Working Group titles:

- WG1: Microbiome and mobile antibiotic resistome in treated wastewater and in downstream environments
- WG2: Uptake and translocation of organic microcontaminants and ARB&ARG in crops
- WG3: Effect-based bioassays required for wastewater reuse schemes
- WG4: Technologies efficient/economically viable to meet the current wastewater reuse challenges
- WG5: Risk assessment and policy development

Eligible STSM applicants can submit their STSM applications online at: www.cost.eu/STSM.

After the online submission you also need to send to the Action Chair Dr. Despo Fatta-Kassinou (dfatta@ucy.ac.cy) the following:

1. The STSM application by email attachment
2. An up-to-date curriculum vitae with list of publications
3. Motivation Letter and objectives (which have to be justified in view of the objectives of the Nereus COST Action as described in the MoU)(http://w3.cost.eu/fileadmin/domain_files/ESSEM/Action_ES1403/mou/ES1403-e.pdf)
4. Analytical work plan
5. Support letter from the sending institution
6. Support letter from the hosting institution

For those of you who are not familiar what an STSM is here is some brief information:

- Short Term Scientific Missions (STSM) are exchange visits aimed at supporting individual mobility, strengthening existing networks and fostering collaboration between Researchers. A STSM should specifically contribute to the

scientific of the COST Action, whilst at the same time allowing those partaking in the missions to learn new techniques, gain access to specific data, instruments and / or methods not available in their own institutions / organisations.

- STSM applicants must be engaged in an official research programme as a PhD Student or postdoctoral fellow or can be employed by, or affiliated to, an Institution or legal entity which has within its remit a clear association with performing research. The institutions / organisations where applicants pursue their main strand of research are considered as Home institutions. The Host institution is the institution / organisation that will host the successful applicant.
- The selection of STSM applicants is based on the scientific scope of the application and how it can support the Action (in full compliance with the MoU) in achieving its scientific objectives. There should be a special consideration with respect to supporting COST policies on promoting gender balance, enabling Early Career Investigators (ECI) and broadening geographical inclusiveness.
- It is of great importance that the proposed STSM is in line with the Memorandum of Understanding of the Action. Also, no deviations from the proposal submitted and approved are allowed. Awardees need to make sure that they implement the work approved without changes.

For more information regarding the selection and reimbursement criteria please read pages 28 & 29 of the "COST H2020 Vademecum" on <http://www.cost.eu/download/COSTVademecum>

All STSMs have to be completed and all grantees must submit their reports by the end of April 2017.

For more info contact the Grant Holder Manager & Administrator Mr. Toumazis Toumazi (toumazis@ucy.ac.cy) or the COST Action Chair Despo Fatta-Kassinou at dfatta@ucy.ac.cy

Wikipedia article dedicated to wastewater reuse



WIKIPEDIA
The Free Encyclopedia

A Wikipedia webpage dedicated to the core subject of NEREUS, i.e. wastewater reuse and relevant challenges, was developed by the Chair of the Action, in close collaboration with members of the Blue Circle Society. The webpage includes among others historical information on wastewater reuse (known facts on international level), wastewater reuse types (de facto wastewater reuse, urban reuse, agricultural reuse, environmental reuse, industrial reuse, potable reuse), advances of wastewater reuse, health and environmental risks of wastewater reuse, and guidelines/policies on wastewater reuse. Information was gathered by relevant reports, scientific papers, policy guidelines, etc.

Link to the article: https://en.wikipedia.org/wiki/Wastewater_reuse

Submission of the NEREUS COST Action ES1403 2-year progress report

We would like to let you know that the 2-year monitoring progress report of NEREUS has been submitted on 7 November 2016 to the Science Officer of the Action. In addition, the following reports/deliverables were submitted :

- Priority list of mobile ARGs and formulate optimized protocol for assessing relative abundance of these genes in effluents and downstream environments (WG1, report)
- Definition of mobile genetic elements in environmental microbiomes and devise novel genome-based methods to monitor them and characterize associated ARGs (WG1, report)
- Training school on methods for detecting and quantifying ARB&Gs in wastewater and soil samples (Implementation and documentation) (WG1, deliverable)
- Preliminary evaluation of the impact of agricultural soil on the bioavailability of organic microcontaminants and heavy metals for uptake by crops (WG2, report)
- Compilation of existing information from literature and international legislation with regard to quality requirements (physico-chemical requirements as well as effect based tests and criteria) for wastewater intended for reuse (WG3, report)
- Consolidation of knowledge on the fate of microcontaminants during treatment (conventional and advanced treatment) (WG4, report)
- Fate of ARB&Gs during biological processes (e.g. CAS, MBR, MBBR, SBR, BAF, constructed wetlands, wastewater lagoons) and characterize removal mechanisms (WG4 in collaboration with WG1, report)

New Publications from members of the NEREUS COST Action

Environmental science and Pollution Research

- **A. Fiorentino, L. Rizzo, H. Guilloteau, X. Bellanger, C. Merlin**, "Comparing TiO₂ photocatalysis and UV-C radiation for inactivation and mutant formation of Salmonella typhimurium TA102, Environmental Science and Pollution Research, 2016, DOI 10.1007/s11356-016-7981-6

As part of the Springer Nature SharedIt initiative, authors can now publicly and legally share a full-text view-only version of

the paper by using this link: <http://rdcu.be/mcc6>

For more information please contact Dr. Luigi Rizzo from the University of Salerno, Leader of WG4 at l.rizzo@unisa.it

New Publications from members of the NEREUS COST Action

Journal of Hazardous Materials

P. Krzeminski, C. Schwermer, A. Wennberg, K. Langford, C. Vogelsang (2017) Occurrence of UV filters, fragrances and organophosphate flame retardants in municipal WWTP effluents and their removal during membrane post-treatment, Journal of Hazardous Materials 323, pp. 165-175, <http://dx.doi.org/10.1016/j.jhazmat.2016.08.001>

For more information please contact Dr. Pawel Krzeminski from the Norwegian Institute for Water Research, Member of WG4 at Pawel.Krzeminski@niva.no

Editorial in Nature Microbiology - Resistance ascends the political summit

The declaration of the United Nations High-Level Meeting on Antimicrobial Resistance culminates an unprecedented period of efforts to change the politics of antimicrobials and global health. Now begins the onerous task of translating the new-found political will into real-world action

Read the editorial at:

http://www.nature.com/articles/nmicrobiol2016223?WT.ec_id=NMICROBIOL-201610&spMailingID=52620332&spUserID=MTc1NjgxNTMwMjQyS0&spJobID=1024996853&spReportId=MTAyNDk5Njg1MwS2

Published date: 26 October 2016, www.nature.com/naturemicrobiology

Call for Abstracts for the 15th International Conference on Environmental Science and Technology (CEST2017), Rhodes Island, Greece, 31 August - 2 September 2017

On behalf of the Organizing and Scientific Committees, we are happy to announce the organization of the 15th International Conference on Environmental Science and Technology (CEST2017). The conference will be held in the island of Rhodes, Greece from 31st August to 2nd September 2017.

The abstract submission is now open until the **31st December 2016**. Visit CEST2017 website (cest.gnest.org) which is regularly updated for more information.

Publication of Papers: All the papers presented in CEST2017, will be submitted to the collaborating journals for inclusion in special issues after the normal peer review of the journals.

Young researchers awards: For the first time in CEST history four presentations from young researchers (2 oral and 2 poster) will be awarded from CEST Scientific Committee. The researchers (postgraduate students and PhD candidates) should indicate their candidacy along with the submission of the abstract. More details will be available in CEST 1st newsletter

Advanced oxidation processes session at the 15th International Conference on Environmental Science and Technology (CEST2017), Rhodes Island, Greece, 31 August - 2 September 2017

This session welcomes contributions related to the following topics:

- Ozone-based oxidation processes
- UV/H₂O₂ and UV/persulfate oxidation processes
- Heterogeneous Semiconductor photocatalysis
- Fenton, photo-Fenton and related oxidation processes
- Electrochemical oxidation processes
- Application of nano-materials in AOPs
- AOPs for the degradation of contaminants of emerging concern in water and wastewater
- AOPs for the degradation of pollutants in the gas phase (*i.e.* NO_x, VOCs, odor compounds, etc.)

- AOPs for the disinfection of water and wastewater
- AOPs in industrial applications
- Generation of transformation products, toxicity evaluation and mechanisms of destruction of contaminants and pollutants during the application of AOPs

The distinguished [Professor Dr Detlef Bahnemann](#) (Leibniz University Hannover, Germany) will give a keynote speech on the Mechanisms of photocatalytic processes.

Conveners:

- **Dr Nikos Xekoukoulotakis**, Technical University of Crete, Greece (nikos.xekoukoulotaki@enveng.tuc.gr)
- **Dr Despo Fatta-Kassinis**, University of Cyprus, Cyprus (dfatta@ucy.ac.cy)

Call for Abstracts for the ASM Conference on Innovative Microbial Ecology for Mitigation of Antibiotic Resistance and Bacterial Diseases, Crystal City, VA (Washington, DC area), 22-25 March 2017

The rapid increase in antibiotic resistance has become one of the biggest challenges to humankind in the 21st century. The all-new ASM Conference on Innovative Microbial Ecology for Mitigation of Antibiotic Resistance and Bacterial Diseases will discuss cutting-edge scientific findings on the ecology of antibiotic resistant microorganisms and innovative mitigation strategies in food, agriculture and medicine. Join your peers from around the world at this event for valuable learning and networking opportunities.

Abstract Submission Deadline: **January 12, 2017**

For more info visit: <http://conferences.asm.org/>

Call for Abstracts for the 4th INTERNATIONAL SYMPOSIUM ON THE ENVIRONMENTAL DIMENSION OF ANTIBIOTIC RESISTANCE (EDAR), 13-17 August 2017, Lansing, Michigan/USA

Visit the conference Homepage: www.antibiotic-resistance.de to receive constant updates about registration, abstract submission, scientific and social program, travel, hotel and all other relevant information.

Blue Circle Society - who we are ...







This should not be our slogan, but make us **keen to get to know each other**, do networking not only during official NEREUS events (not all of us manage to go to every meeting), but also apart from that. **Checking the bulletin you might find out about someone doing interesting work in your field or working on a topic you are looking for expertise or exchange of knowledge.** From my own experience with the IWA YWP network I remember that the network made it easier for me to approach people. To make it short: use the opportunity to present yourself via our bulletins & to check out about the others :-)

At the moment we are more than 160 ECIs and constantly growing. With each bulletin we present 4 members of the Blue Circle Society and including the one you receive with this email we have presented 24 of us. So, it will roughly need 25 more bulletins to present everyone. That's quite a task and facing the current interval of 3 - 4 weeks we might become a senior expert before we took the chance to present ourselves as an early career investigator (ECI) ;-). Enough of preaching now - forgive me that! So please find attached our bulletin and hope to see you in the next one! Just send your paragraph and a nice picture to Marlen (marlen.vasquez@cut.ac.cy) and me (hschaar@iwag.tuwien.ac.at)

Dr. H.M. Schaar (BCS Leader)

The Blue Circle Society Bulletin – Member presentation

	<p>Damiano Cacace, MSc</p> <p>Dresden University of Technology</p> <p><u>Current status:</u> PhD Student</p> <p><u>Field of expertise:</u> Antibiotic resistance in wastewater and its spread in the environment</p> <p><u>Keywords:</u> antibiotic resistance, environmental microbiology, molecular biology</p>
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	<p>Papageorgiou Myrsini, MSc</p> <p>Aristotle University of Thessaloniki, Greece <u>Current status:</u> PhD Student</p> <p><u>Field of expertise:</u> Monitoring, determination and risk assessment of emerging contaminants and transformation products in environmental samples</p> <p><u>Key publication:</u> “Seasonal occurrence, removal, mass loading and environmental risk assessment of 55 pharmaceuticals and personal care products in a municipal wastewater treatment plant in Central Greece” Science of The Total Environment 543, 2016, 547-569</p>
	<p>Fernández-López Carmen, Dr</p> <p>University Catholic of Murcia (UCAM), Spain <u>Current status:</u> Assistant Professor</p> <p><u>Field of expertise:</u> Fate of emerging contaminants in wastewater and environmental systems</p> <p><u>Key publication:</u> “Comparison of the removal efficiencies of selected pharmaceuticals in wastewater treatment plants in the region of Murcia, Spain” Ecological Engineering 95 (2016) 811–816</p> <p><u>Keywords:</u> Waste water treatment plants, pharmaceutical compounds, water reuse, Biological degradation.</p>
	<p>Rui S. Ribeiro, MSc</p> <p>Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials, University of Porto, Portugal <u>Current status:</u> PhD student</p> <p><u>Field of expertise:</u> Advanced wastewater treatment technologies</p> <p><u>Key publication:</u> Catalytic wet peroxide oxidation: A route towards the application of hybrid magnetic carbon nanocomposites for the degradation of organic pollutants. A review, Appl. Catal., B 187 (2016) 428-460</p>
	<p>Mariano González</p> <p>Catholic University of Murcia (UCAM), Spain <u>Current status:</u> PhD Student</p> <p><u>Field of expertise:</u> Fate of emerging contaminants in wastewater and environmental systems</p>
	<p>Muhammad Riaz, Dr</p> <p>Government College University Faisalabad – Pakistan <u>Current status:</u> Assistant Professor – Environmental Sciences</p> <p><u>Field of expertise:</u> Use of wastewater in agro-ecosystems</p> <p><u>Key publication OR project:</u> Impact of textile effluent on plant growth, nitrification and urease activity in soil</p>
	<p>Ivone Vaz-Moreira, Dr</p> <p>Centro de Biotecnologia e Química Fina, Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Porto, Portugal <u>Current status:</u> Post-doctoral researcher</p> <p><u>Field of expertise:</u> Water bacterial diversity; Antimicrobial resistance; Taxonomy</p> <p><u>Key publication OR project:</u> Vaz-Moreira, I., Nunes, O. C., Manaia, C. M. (2014) Bacterial diversity</p>



Fabio Polese, PhD

Technical University of Denmark

Current status: Postdoctoral fellow

Field of expertise: Fate of emerging organic contaminants in wastewater and environmental systems, process modelling

NEREUS COST Action ES1403

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"This newsletter is based upon work from COST Action ES1403 - NEREUS, supported by COST (European Cooperation in Science and Technology)".

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