ICEST 2018

2nd International Congress of Environmental Science & Technology



BOOK OF ABTSRACTS

3-5 May, Hammemet, Tunisia

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2nd International Congress of

ENVIRONMENTAL SCIENCE & TECHNOLOGY

3-5 May, Hotel Vincci Marillia, Hammemet-Tunisia

BOOK OF ABSTRACTS

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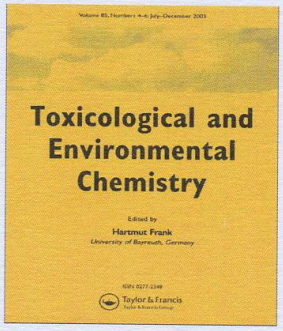
Congress Supporting Journal



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WELCOME

On behalf of the Organising Committee, we wish to welcome you at the 2nd International Congress of **Environmental Science &Technology**, ICEST'2018, which is taking place at Hotel Vincci Marillia, Hammamet, from 3 to 5 May 2018.

ICEST'2018 provides a perfect discussion platform for researchers from different institutions to present the latest research findings and describe emerging technologies, and directions in Environmental Science and Technology. Our conference topics reflect the role of interdisciplinary fields research in responding to the different challenges of our environment.

Due to excellent submissions, we were able to build an outstanding scientific programme consisting of four plenary sessions and 7 keys note conferences on current topical issues in the field of environmental research. 225 abstracts have been submitted from 8 countries. 187 abstracts were selected for the final programme and were allocated to 73 oral and 114 conventional poster sessions.

Journal of ***Toxicological & Environmental Chemistry*** will published accepated abstracts from ICEST'2018. The organisers give their thanks to the Editor in Chief of T&EC and to the sessions chairmen for their competent work in setting up the programme

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We wish to all participants a successful conference and pleasant time in the charming town Hammamet as well as in Tunisia.

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Biotechnology

Oral Communications Session: BIOTECHNOLOGY– Room 1

Ref.	Author's name and abstract titles		
BO-1	Alaeddin	Bobat	A trial on biological control of Zebra Mussel (*Dreissena polymorpha*)
BO-2	AMEL	Ismail	Culturable epiphytic bacteria diversity of different seaweeds groups from Northern Tunisian coasts
BO-3	AMENI	Kthiri	Biochemical and bio-molecular manifestations induced into *Saccharomyces cerevisiae* living under magnetic field
BO-4	Asma	Gnouma	Strain selection of microalgae isolated from Tunisian coast for biodiesel production
BO-5	Chérifa	Boubékri	Total phenolic compounds , and antioxidant activity of quinoa genus cultivated in south Algeria
BO-6	Emna	Chaabani	Effect of extraction solvent on total polyphenol content, total flavonoid content, total anthocyanin content and antioxidant acitivity of *Pistacia lentiscus* L. berries
BO-7	Fahima	Fellah	Seasonal variations in the phenolic compound content and antioxidant activities of the red algae *Sphaerococcus coronopifolius* Stackhouse from Tiskerth islet, Bejaia, Algeria
BO-8	Haroune	Khelifi	Effect of phenolic compounds extracted from *thymus vulgaris* l leaves on yogurt starter culture
BO-9	Holm	Amara	Tolerance of Douglas fir somatic embryos to Aluminum stress and impact of the vegetation cover type on soil characteristics: acidity and Aluminium bioavailability
BO-10	Houssem	BEN YAHIA	Multilocus Sequence Typing and plasmid characterization of multiresistant *E. coli* collected from wild birds in Tunisia
BO-11	Imen	Zribi	Geographic variation of Tunisian *Borago Officinalis* L. essential oil using GC-MS methods.
BO-12	Issam	Ben Salem	Performances Evaluation of combined ionizing radiation and biological removal technologies of pharmaceuticals antibiotic effluents
BO-13	Kaouther	Saidi	The exploration of specialized databases for the structure-activity relationship study and the 'in silico' design of new antimicrobial peptides
BO-14	Khadija	Hajji	PACAP protects against oxidative stress in an environmental *Drosophila* model of Parkinson's disease
BO-15	Manel	Mechmeche	The development of legume-based yogurt by using Tomato Seed industry by-product as a medium
BO-16	Marwa	Abdallah	The antiproliferative effect of olive oil phenolic extract on murine melanoma cells (B16-F10) by the induction of enzymatic activity of transglutaminase-2 (TG-2)
BO-17	Naceur	Djébali	Integrated Management of Black Scurf of Potato
BO-18	Olfa	Ben Salem	Venous thromembolism: A propective study of C677T MTHFR inhereted polymorphism and environmental risk factors
BO-19	Redha	Djenidi	Antidepressant-like effect of phenolic extract of the red algae *Sphaerococcus coronopifolius* in female Wistar rats

LIST OF ABSTRACTS: ORAL PRESENTATION

BO-20	Rguez	Safa	*Cupressus sempervirens* essential oils successfully control postharvest grey mould disease of tomato
BO-21	Rifka	Hammami	Study of Salinity Effect on Durum Wheat lines (*Triticum Durum L.)* Varieties and at Germination and early seedling growth stage
BO-22	Safia	Himri	Host-Guest interaction of Hinokitiol into β-cyclodextrin
BO-23	Samar	Barnis	Does damage/defence biomarkers tissular distribution related to chemical exposition degree? A case study using *Danio rerio* exposed to multi-contaminated sediments
BO-24	Slim	Ghrir	Modulation of endogenous enzymes activity as a protective effect of grape seed extract during experimental cerebral ischemia/reperfusion injury
BO-25	Yosr	Ben Redjem Romdhane	Comparative study of antimicrobial activities of marine sponge's epibionts from Tunisian coast
BO-26	Mouna	Mahjoubi	Bioaugmentation and microbial degradation of petroleum hydrocarbon by selected hydrocarbonoclastic bacteria and reconstructed consortia
BO-27	Meher	Bellakhal	Monitoring of phytoplankton species near shellfish farms in Bizerte lagoon

Oral Communications Session: WATER -Room 1

Water and Wastewater Treatment

Réf.	Author's name and abstract titles		
WO-1	Alaeddin Ertan Sadettin	Bobat Mert Yılmaz	The preliminary results of smart water systems in mitigation of water losses
WO-2	ANIS	Attour	Treatment of Fe(II) containing wastewaters by electrocoagulation: Towards a better understanding of the involved phenomena
WO-3	Hamza	Ben Amor	Magnetic field: Effect on water characteristics and soil
WO-4	Hana	Ben Mahrez	Hydro-Geophysical study of Oligocene aquifer reservoirs in the Regueb region
WO-5	Iheb	Bouzid	Surfactant foam for enhanced reagents delivery in unsaturated anisotropic soils
WO-6	Iheb	Bouzid	Compatibility of surfactants with activated-persulfate for the selective oxidation of PAH in groundwater remediation
WO-7	Imen	Tbessi	Effect of Silver and manganese co-doped titanium dioxide to enhance the photocatalytique degradation of diclofenac under UV-A light irradiation
WO-8	Jamila	Skafali	TiO_2 photocatalyst doped with transition metals (Co, Cr, Fe and Zr) : Application in wastewater treatment
WO-9	Lobna	Elleuch	A new insight into the remediation of highly contaminated landfill leachate using biological pre-treatment combined with Ag-doped TiO_2 photocatalytic process
WO-10	Mohammed Fouzi	Ghorab	Solar-driven wastewater treatment using silver-titanium dioxide

Oral Communications

Session 1

BIOTECHNOLOGY

BO-1

A trial on biological control of Zebra Mussel (*Dreissena polymorpha*)

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Background: Zebra mussels cause ecologic, technic and economic damages where available. Multiple technic and economic impacts include the negative effects such as the interference with fishing gear, prey for commercial fish, alteration of fish communities, fouling of cages, clogging of water intake pipes, fouling of ship hulls and navigational constructions. This trial aims to reveal in which proportion of zebra mussels are fed by crayfish (*Astacus leptodactylus*) in Turkey. Zebra mussels settle on hard surfaces normally, including inorganic substrata and biological surfaces such as carapaces of crayfishes and a range of freshwater organisms. Because adult crayfish moult at longer intervals than do juveniles, the number of filter-feeding zebra mussel accumulates on adult crayfish, and their foraging is likely diminished. Crayfish encrusted with mussels move more slowly and must spend more energy as a result of carrying this load of attached bivalves. It is unclear if these attached mussels increase or decrease risk of predation. Crayfish derive energy from suspended particles by filter feeding even though they also forage on a wide range of other foods that differ in size and type. Competition with zebra mussels for suspended organic material could have a negative effect on adult crayfish under some conditions. Crayfish encrusted with mussels move more slowly and must spend more energy as a result of carrying this load of attached bivalves. It is unclear if these attached mussels increase or decrease risk of predation. Competition with zebra mussels for suspended organic material could have a negative effect on adult crayfish under some conditions.

Materials/Method : Trials with zebra mussels, crayfish and trout pellets were carried out at constant water temperature of 22°C and in the laboratory settings. 18 juvenile crayfish that their mean weights are 0.04 g, their mean total lengths 10.95 mm and their mean carapace lengths 6.13 mm were placed in 18 glass petri dishes. In the experiments, 240 juvenile zebra mussels *(Dreissena polymorpha*) of 1.95 mm in mean length were used. 1 juvenile crayfish and 10 juvenile zebra mussels were put into each of six petri dishes (first series); 1 juvenile crayfish, 10 juvenile zebra mussels and 0.01 g granular fish feed into each of other six petri dishes (second series); and 1 juvenile crayfish and 0.01 g granular fish feed into each of different petri dishes (third series as a control). At the end of the second day, faeces of the crayfish were examined in all petri dishes, and a large proportion of the granular fish feed had not been consumed by the crayfish.

Results: At the end of 48 hours the fine faeces and a large number of unconsumed granular pellet feed were observed in petri dishes. Furthermore, zebra mussel and pellet feed (M+P) mostly were consumed. At the end of 3rd day it was recorded that all the zebra mussels in petri dishes were consumed. The consumption of pellet feed in control petri dishes was realized as 50 per cent.

Conclusion: The results obtained both field and lab trials show that adult and juvenile crayfish can use affectively to suppress zebra mussel population or to mitigate its damages. However, the researches must be focused on zebra mussels in environment where other invertebrates will naturally become and the decision must be made whether crayfish will be commonly used in control of zebra mussel population or not.