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## Editorial

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**Biographical notes:** Aleksander Zidanšek is a Professor of Physics at the Faculty of Natural Sciences and Mathematics at the University of Maribor, Researcher at 'Jožef Stefan' Institute and the Secretary General of Jožef Stefan International Postgraduate School. He is active in environmental physics, renewable energy sources including space-based applications, condensed matter physics, physics of liquid crystals, nuclear magnetic resonance, small angle X-ray scattering, radar and Terahertz imaging as well as applications in security. He is also an Associate member of the Club of Rome and Fellow of the World Academy of Art and Science.

**Abstract:** Slaven Dobrović is an Associate Professor at the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb. He is the Head of Chair of Water and Environmental Engineering at the Department of Energy, Power Engineering and Environment. Since 1996, he has been Researcher on three scientific projects financed by Croatian Ministry of Science and Technology. The major areas of research include advanced oxidation processes of NOM, disinfection of drinking water rich in NOM, ballast water treatment and environmentally friendly waste management. In the period 2007–2010, he was the Croatian expert delegate in the FP7 Programme Committee, theme environment.

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Contemporary global crises of economy, energy, environment and other elements of society threaten the ability of future generations to meet their needs for a quality life. Significant technological breakthroughs will be necessary to overcome these crises. Many different areas of environment, sustainable development and energy are included in global efforts towards these goals, including in the area of renewable electricity and heat generation, biofuels and electricity for transport, energy efficiency, especially in buildings and transportation, cogeneration, nuclear energy in those countries in which it is politically acceptable, which will all be achieved by a combination of binding targets, certificate trading, financial mechanisms and fiscal policies. The intertwining of stable

economic development and environmental protection is becoming more and more important.

The Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, held in 2011 for its 6th consecutive time, was dedicated to the improvement and dissemination of knowledge on methods, policies and technologies for increasing the sustainability of development by de-coupling growth from natural resources and replacing them with knowledge-based economy, taking into account its economic, environmental and social pillars, as well as methods for assessing and measuring sustainability of development, regarding energy, transport, water, environment and food production systems and their many combinations. Sustainability being also a perfect field for interdisciplinary and multi-cultural evaluation of complex system, the Dubrovnik Conference has during the first decade of the 21st century become a significant venue for researchers in those areas to meet, and originate, discuss, share, and disseminate new ideas.

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” The Report of the U.N. Brundtland Commission, *Our Common Future* (1987)

This special issue of papers presented at the Dubrovnik Conference will try to help researchers and experts from the field of environment and sustainable development with fresh ideas to strengthen the global potential for sustainable development.

The keynote presented papers from the Dubrovnik Conference comprise contributions of Busto et al. on ‘Mercury mobility and availability in highly contaminated solid wastes from a chlor-alkali plant’, Finnveden et al. on ‘Developing and evaluating new policy instruments for sustainable waste management’, Van den Heede et al. on ‘Full probabilistic service life prediction and life cycle assessment of concrete with fly ash and blast-furnace slag in a submerged marine environment: a parameter study’, Stanek and Czarnowska on ‘Environmental externalities and their effect on the cost of consumer products’, Cornier on ‘The urban sustainable development in European Union through ranking: a tool for governance or a report of territorial disparities?’, and Feuerborn presented an overview of ‘Coal combustion products in Europe – sustainable raw materials for the construction industry’.

## **Acknowledgements**

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