Book of abstracts:

Chem2Change Environmental Chemistry towards Global Change 2nd Online ACE Seminar on Chemistry and the Environment Led by Early-Career Scientists

15-16 March 2022

On-line meeting

Organised by:

Association of Chemistry and the Environment

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Cover design:

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Published by:

University of Pardubice

Publication year:

2022

ISBN 978-80-7560-406-4 (pdf)

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ABOUT CHEM2CHANGE

The 2nd Online ACE Seminar on Chemistry and the Environment led by Early-Career Scientists (Chem2Change – Environmental Chemistry towards Global Change) complements the long tradition of international EMEC conferences. The early-career scientist-led seminar is full of interesting topics from areas, such as Global challenges (Corona virus, climate, & nature restoration), Instrumental analysis & method development in environmental chemistry, and Sustainability & the environment (Circular economy, treatment technologies, agriculture & industry). The content of the programme mainly consists of oral presentations by early-career scientists but also by invited speakers as well as a workshop on mapping participant research interests to form potential future collaborations. Furthermore, in each day of the seminar, the social component of the seminar is enhanced by discussions on sustainable living and participation of early-career researchers in the Association of Chemistry and the Environment, as well as with an online social event at the end.

COMMITTEES

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- Gilles Mailhot, University of Clermont Auvergne, France
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- Bc. Marek Tykva, University of Pardubice, Czech Republic
- Dr. Gordana Gajica, University of Belgrade, Serbia
- Slađana Savić, M.Sc., University of Belgrade, Serbia

PROGRAMME

March 15, 2022

Name Item Item Item Item Item Item
introduction Albert Lebede
University of Pardubice
of Waste Valorization [Dr. Nuno Ratola (Unive do Porto, Portugal)
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LIBS AS GREEN ANALYTICAL TOOL IN ENVIRONMENTAL CHEMISTRY

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In the past two decades, with recent advances in laser technology, Laser-Induced Breakdown Spectroscopy (LIBS) has become a more and more popular analytical method for the analysis of any type of samples. Some exclusive properties such as rapid, multi-element analysis of any kind of material, non-contact and almost non-destructive, independent of sample conductivity, geometry and size make this method superior to the other standard optical emission techniques. In this work, we will demonstrate the possibility of using a cost-effective alternative to commercial LIBS systems, the TEA CO₂ laser-based LIBS setup for analysis of environmental-related samples: for direct analysis of solid samples and indirect analysis of liquid samples. Finally, our developed method doesn't use any hazardous reagents and solvents and maximizes safety for operators and the environment, which creates it in full accordance with the principles of green analytical chemistry.

Acknowledgements

This work was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia; grant number 451-03-68/2022-14/200017.

- [1] S. Zivkovic, et al., J. Alloys Compd. 700 (2017) 175-184.
- [2] S. Zivkovic, et al., Microchem. J. 137 (2018) 410-417.

THANKYOU FOR YOUR PARTICIPATION!

ISBN 978-80-7560-406-4 (pdf)