

Sustainable solutions for challenges in developing countries

2016-02-12 Berlin/Lüneburg. Today Leuphana University of Lüneburg and information solutions provider Elsevier announce the top five candidates for the first Green and Sustainable Chemistry Challenge. The selected projects offer environmentally friendly and sustainable processes, products and resources which can be used to address challenges in developing countries.

The challenge was launched by Elsevier, in close collaboration with the Leuphana University of Lüneburg, Germany as a response to the increasing strain on the planet's resources and the growing importance of inventing alternative ways to carefully use them.

"We are delighted with the response that we received from participants all over the world," says Prof. Dr. Klaus Kümmerer, Director of the Institute of Sustainable and Environmental Chemistry at Leuphana University. He adds: "The great number of submitted proposals does not only underline the importance and relevance of this topic but demonstrates that fantastic ideas and initiatives exist already, which - with more support - could make a tremendous difference."

The final candidates were selected by a jury of international experts out of almost 500 submissions from across the globe. From sustainable textile dyeing and biopesticides to water purification, all projects offer innovative solutions to enhance life in developing countries and solve today's global challenges. The finalists will defend their proposals to the panel of judges at the first International Green and Sustainable Chemistry Conference in April in Berlin. The winning project will receive a cash prize of € 50,000 for the implementation of their project, the winner of the second prize will receive € 25,000.

"Without a doubt the jury had a difficult time selecting the five finalists from the many outstanding entries and will be challenged to choose the two winners," says Rob van Daalen, Senior Publisher at Elsevier responsible for a portfolio of journals in Physical and Theoretical Chemistry. "As a scientific publisher, we see that research in sustainable chemistry has grown over the last years. This is why we not only want to raise awareness for the topic itself but also create opportunities for researchers to connect and build a community."

The nominated projects are:

- Yunsang Kim (University of Georgia, USA): Sustainable Textile Dyeing Using Nanocellulosic Fibers

Development of innovative textile dyeing technology based on nanocellulosic fiber that aims to reduce generation of wastewater and release of toxic chemicals in textile dyeing process

- Daniel Joe Dailin (Universiti Teknologi Petronas, Malaysia): Biopesticide for improvement of paddy yield

Development of a water-based bio-pesticide by utilizing a unique combination of different plant extracts such as ginger, garlic, red chili and neem

- Lucian Lucia (North Carolina State University, USA): BIO-AQUA Water Purification Biobased initiative to optimize a quick and unique approach to water purification to remediating drinking water in third world nations of its heavy metal toxins

- Eric Chiang (UCSI University, Malaysia): Sustainable Fertilizer Delivery Systems and Biosorbents

Carboxymethyl cellulose as a Root Targeted Delivery Vehicle as well as biosorbent to remediate polluted sites and to reduce leaching of fertilizers into water catchments

- Anindya Ghosh Roy (LMU Munich, Germany): To provide an eco-friendly, low cost clean water solution

An affordable solution to minimize the problem of contaminated water sources by designing a portable water filter that provides clean water solution and is 100% biodegradable

For further information about the Green Chemistry Challenge, read more on the Elsevier Green and Sustainable Chemistry Challenge website, watch this short video clip about the challenge, or join the conversation on social media: @ELSCHEMISTRY and #GreenChemChallenge. To find out more about sustainability science as a research field, read Elsevier's Sustainability Science in a Global Landscape report.

About Leuphana University

Leuphana University of Lüneburg addresses the future of social commitment to civil society in the 21st century. Culture, sustainability, entrepreneurship, and education are the four thematic focuses in research and teaching. The Leuphana College is the place for Undergraduate studies and offers students a diversely integrated, interdisciplinary bachelor's program. At the Graduate School students can choose from various master's programs with possibilities for interdisciplinary specialization. The Professional School offers a wide range of continuing education programs.

More than 9,000 students are currently enrolled at Leuphana. Nearly 750 of the 1,200 staff members are academics, 155 of them professors.

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