

Environmental Lecture Series XIII

Wednesday, Oct. 16, 2024
12:00 pm – 1:00 pm (EST)

Teams Meeting:
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Sustainable Chemistry in the Context of Sustainable Food Systems



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The concept of sustainable chemistry (SC) (Zuin Zeidler, 2023) addresses the reduction and simplification of total substance, material, product – including the so-called waste or loss – and energy flows, from the local to global level. Circularity for materials implies that the origin of products, their composition, ways to collect, extract, transform, reduce, reuse or recycle them, associated risks and benefits, costs and gains, drivers, potentialities, functions and services are perceived as a system, allowing one to start with measures at the source as under discussion for other sectors, such as the Food sector (Zuin Zeidler, 2024). Thus, in the context of circularity, the knowledge required to apply systems thinking is fundamental to understand the challenges and potentialities promoting the construction of sustainable food systems collectively, in an integrated manner (Zuin Zeidler & Kümmerer, 2021). This presentation is an invitation to put chemistry and specially chemistry education in a broader perspective to discuss circularity of materials and relevant processes, considering some key elements towards more sustainable food production and consumption models.

References:

Zuin Zeidler, V. G. (2023). Defining sustainable chemistry: an opportune exercise? *Science*, 382, 6667.

Zuin Zeidler, V. G. (2024). Sustainable chemistry and food systems lessons-the same procedure as every year? *Science*, 383, 6683.

Zuin Zeidler, V.G., & Kümmerer, K. (2021). Towards more sustainable curricula. *Nature Reviews Chemistry*, 5, 76–77.

Dr. Dr. Vania Zuin Zeidler is a Full Professor at the Institute of Sustainable Chemistry at Leuphana University (Germany), and currently the Pro-Dean of Gender and Diversity, the Coordinator of the new Master Program "Sustainability Science: Resources, Materials and Chemistry (M.Sc.)" and the Chair of the PhD Committee Dr. rer. nat. at the Faculty/School of Sustainability. Her background is Green and Sustainable Analytical Chemistry and Green and Sustainable Chemistry Education, with major interests in developing analytical methods that are incipient to determine renewable and bioactive high-value organic substances extracted from agro-industrial residues (separation science). Prof. Zuin Zeidler has established a well-structured network between industries, governmental and non-governmental sectors to improve research and application of Green and Sustainable Chemistry knowledge all over the world. She was the Founding Director of the Field & Food Tech Hub -UFSCar (<http://fieldfoodtechhub.ufscar.br/>), a RD&I platform aiming at being a centre of excellence in green technologies and sustainability in resilient agro-industrial sectors in all aspects, from farm to fork. Prof. Zuin Zeidler is author of several publications of high impact in the areas of her expertise and has been invited to give several lectures in the academic and industrial sectors.