

Workshop on Advanced Materials and Emerging Issues

8th of October 2020, 13:30 – 15:30

Overview

Advanced materials are materials which feature a series of exceptional properties (mechanical, electric, optic, magnetic, etc) or functionalities (self-repairing, shape change, decontamination, transformation of energy, etc) that differentiate them from the rest of the universe of materials. These new properties can be achieved by the precise control of its composition and internal structure. An important subcategory of AM are nanotechnologies which also exemplify one additional principle characteristic for this group – the combination of engineering and biological approaches at low levels of size.

Therefore, advanced materials can be used in a universal way and offer new solutions to a great variety of well-known problems in creating new products, changing consumption patterns and interfering with health and environmental challenges. On the other hand, as to their innovative character, they also might pose unintended consequences and uncertainties which have to be identified and evaluated as early as possible to ensure a safe and sustainable development of advanced materials.

The safe development of advanced materials encompasses also the adaptation of regulatory fields such work place safety, product liability, consumer protection and environmental aspects, including chemical regulation and the systematic development of standards. Especially the interdependencies between possible benefits and their fate in the human body and in environmental media during their product life will be of utmost interest for risk research and safety management. The long-term experiences in Europe in regulating the safe and sustainable development of nanotechnologies might be useful for managing the upcoming challenges which might concern an appropriate development strategy of advanced materials in the next few years.

Agenda

13:30 – 13.40	Welcome Mr. Alexander Pogany, Austrian Ministry of Climate Action
13.40 – 14.05	Introduction: Advanced Materials and Emerging Issues Dr. Andre Gazso, Austrian Academy of Sciences
14.05 – 14.20	Data-driven Materials Science and Technology - Materials Informatics Dr. Yasuo Koide, National Institute for Materials Science (NIMS), Japan
14.20 – 14.35	"Challenges for complex materials with diverse crystal stable phases".

	Dr. Jun'ichi Sone, Japan Science and Technology Agency
14.35 – 14.50	Biomimetic and Bioinspired Advanced Materials Prof. Dr. Ilse Gebeshuber, Technical University of Vienna
14.50 – 15.00	Questions and Answers
15.00 - 15.30 (15.45 if needed)	Plenary Debate on Advanced Materials <ul style="list-style-type: none"> - Advanced Materials: Applications and Trends - Further Actions by the ANF

Link to the webmeeting via zoom:

<https://fh-campuswien.zoom.us/j/3278205792?pwd=L1dDRkRvdUhCdFVUSktKa1hleERCUT09>

Meeting-ID: 327 820 5792

Password: 9112

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