SusMat01
Sustainable Materials
WiSe 2024/2025

Prof. Dr.-Ing. Markus Gallei, Prof. Dr. Guido Kickelbick

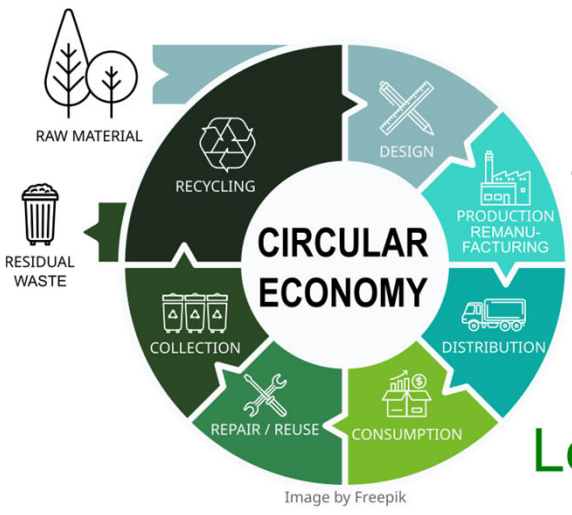
PRESENTATIONS

Session 1: Monday 27.01.2025, 12.30 – 2.30 pm Geb. C4.3, HSII
Session 2: Monday 03.02.2025, 12.30 – 2.30 pm Geb. C4.3, HSII

Students short presentations about the following topics on sustainability:

CO_2 storage - Mineral carbonization - CO_2 – neutrality/positivity/negativity - Recycling of metals - Carbon footprint and recycling strategies for metals - Input-Output analysis - Sankey diagrams - Sea level rise - West Antarctic Ice Sheet - Power to X - Power to Gas - Power to Fuel - Power to Liquid - Power to Chemical - Industrial symbiosis in Kalundborg, Denmark - Achieving climate protection targets - Passive House - R10 (insulation) - Mode of action of greenhouse gases- greenhouse effect - Natural Cement (Louis Vicat, France) - Residence time of greenhouse gases - CFCs as a greenhouse gas - Radiation balance of the earth - Models of the greenhouse effect - Earth's radiation budget and the effect of greenhouse gases - CO2 capture - CCS technologies (e.g. Schwarze Pumpe, Germany) - ESA process - Bioconversion of CO_2- MEA process/amine washing -CO2 storage test sites - FLEXX Eco-Bogie - CO2-based polymers - CO_2 certificates - Sustainable business models - Ecological backpack ("Ökologischer Rucksack") - Virtual water (water footprint) - Biomimetic (in the context of sustainability) Microplastic Logistic Challenges (ecological) - Vertical Farming

Everyone is invited to take part and listen if they are interested.



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UNIVERSITÄT DES SAARLANDES

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SUSTAINABLE MATERIALS
Lecture Series by Markus Gallei and Guido Kickelbick