

Research topics for Utopia MycoCatalysis 2026

Scientific team – PhDs & Postdocs:

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Visualisation team at FH JOANNEUM:

- **Jana Klammer**
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- **Laura Huber**

Research at the following locations:

- Chair of Physical Chemistry /Technical University of Leoben:
<https://physchem.unileoben.ac.at/en/subwebs/chairs/institutes/chair-of-physical-chemistry>
- Institute of Microbial Genetics/ BOKU University Vienna:
<https://boku.ac.at/en/agri/imig>
- Institute of Experimental Physics/TU Graz: https://austria-forum.org/af/Wissenssammlungen/Neues_aus_der_Wissenschaft/Neues_Syntheseverfahren_f%C3%BCr_Katalysator-Materialien_%28TU_Graz%29

About the project:

The project investigates the use of vanadium-rich fungi as sustainable, heterogeneous catalysts for oxidation reactions. By converting biological materials into catalytically active systems, the aim is to develop resource-efficient alternatives to precious-metal-based catalysts and to enable the environmentally friendly production of basic chemicals from renewable raw materials.

Jessica Michalke, a postdoctoral researcher at the Chair of Physical Chemistry at Montanuniversität Leoben, is leading this unconventional research project into the production of vanadium-based catalysts. In 2024, she received the ‘Disruptive Innovation’ grant for this work: <https://www.just-magazin.com/science/vanadiumasierte-katalysatoren>: <https://www.just-magazin.com/science/vanadiumasierte-katalysatoren>

