



TECHNISCHE
UNIVERSITÄT
WIEN

VIENNA
UNIVERSITY OF
TECHNOLOGY

Institute of Applied
Synthetic Chemistry
Getreidemarkt 9/E 163
1060 Wien
<http://www.ias.tuwien.ac.at>

Open PhD position at TU Wien "Toughening of 3D printed Photopolymers for Dental Aligners"

Project description:

In the last 20 years Additive Manufacturing, also known as 3D printing, has emerged and is becoming more and more popular. Especially Vat-based 3D printing is of high interest as photopolymerizable formulations can be printed with very high resolution. Up to now, getting tough materials is still a challenge and has not been solved until now in a satisfying manner.

The main focus of this PhD thesis is the synthesis of new monomers for modern light-based processing of polymers by means of 3D printing. Their reactivity is investigated by hyphenated analytical techniques such as RT-FTIR photo-rheometry. In addition to the mechanical properties, the application of the materials should be verified in close cooperation with various international partners from the industry.

Starting date: from 1.9.2026 until 1.7.2027

PhD Positions

Duration: 3 years

Employment: 30 hours per week (currently 2.830€ Brutto/month)

Employment criteria: Completed diploma or master's degree in the field of chemistry or equivalent university studies



Qualification criteria:

In-depth knowledge of the synthesis and characterization of organic compounds and in the field of macromolecular chemistry. Knowledge in the field of photopolymerization is an advantage. We expect good communication and team skills. For the supervision of students in laboratory exercises and bachelor theses sufficient knowledge of English or German language is required.

Background information:

www.ias.tuwien.ac.at/research-units/mc/polymer-chemistry-and-technology/

For further information please don't hesitate to contact:

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