technische universität dortmund

RESOLV
RUHR EXPLORES SOLVATION
CLUSTER OF EXCELLENCE - EXC 2033

SupraChem 2026
TU Dortmund, March 8–10

EINLADUNG

Im Rahmen der Konferenz „SupraChem 2026“ hält

Herr Prof. Dr. Takuzo Aida

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einen Vortrag mit dem Thema:

“Supramolecular Polymerization for a Sustainable Future”

One of the major issues causing environmental destruction is plastic waste. Between the years 1950 and 2015, we produced 8.3 billion tons of plastic, yet less than 9% was recycled. 6.3 billion tons became waste, either incinerated or discarded into the natural environment. While many strategies, such as improving plastic materials, have been explored to address the plastic waste problem, we believe a fundamentally new strategy is necessary. We focused attention on the concept of supramolecular polymers, which I have tightly committed from the beginning [1–12]. At the end of November 2024, we reported supramolecular plastics [13–15], as a strategic extension of the concept of supramolecular polymers using salt-bridge-forming ionic monomer pairs. This new class of polymeric materials disassembles into monomers when exposed to salts in the natural environment and is then metabolized by microorganisms. Quite recently, we developed an ultrathin low-density (0.5) artificial luffa sponge with a lignin structure from resorcinol and formaldehyde in an electric bilayer [16]. We also found that water-soluble macromolecules can be separated by double liquid-liquid phase separation under high salt conditions [17].

References
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Zeit: **Sonntag, 08.03.2026, 16:50 Uhr**
Ort: **Campus Nord, SRG I, Hörsaal 1**

Für die Dozierenden der Chemie

Im Auftrag des Dekans

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