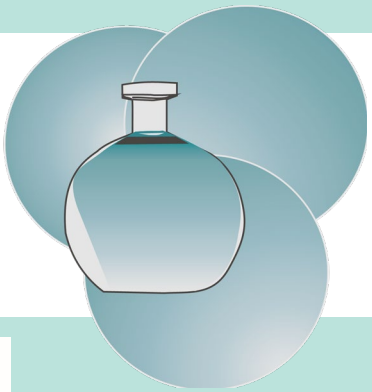
Fakultät für Naturwissenschaften

# Institut für Chemie



**lädt ein**

**gemeinsam mit der Gesellschaft Deutscher Chemiker zum**

GDCh
GESELLSCHAFT DEUTSCHER CHEMIKER

## Vortrag

**von Herrn**

**Prof. Dr. Dirk Ziegenbalg**

**Institut für Chemieingenieurwesen**

**Universität Ulm**

## „Photochemical Reaction Engineering – Towards Enhanced Chemical Processes“

| | |
|---|---|
| am: | 30.04.2020 |
| um: | 16:00 Uhr |
| wo: | 1/232 (Straße der Nationen 62) |

Gäste sind herzlich willkommen!

*„Treffen mit dem Vortragenden“*

*Kaffee und Kekse ab 15:30 Uhr*

*im Hörsaal 1/232*

TECHNISCHE UNIVERSITÄT CHEMNITZ

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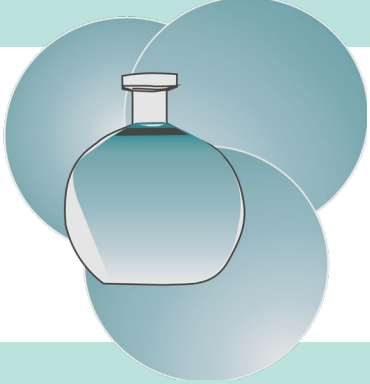


## Prof. Dr. Dirk Ziegenbalg

**Institut für Chemieingenieurwesen**

**Universität Ulm**


GDCh Gesellschaft Deutscher Chemiker

## „Photochemical Reaction Engineering – Towards Enhanced Chemical Processes“

Using light to produce chemicals is not only an attractive option to harvest solar energy but also enables the sustainable fabrication of value-added products. To compete with conventional thermal process routes, it is not only sufficient to identify suited photochemical process routes, the technical realization has to possible as well. Photochemical reaction engineering is the foundation for the development of large-scale photochemical processes that are required for industrial application. It contributes to the enhancement of photochemical processes and the generation of fundamental knowledge as well. Prerequisite for this is the availability of suited measurement techniques together with a fundamental understanding of the interaction of the involved phenomena. The work of the research group Ziegenbalg at Ulm University is centered around the development of highly optimized and intensified photochemical processes by applying reaction engineering concepts.

The lecture will cover aspects of characterizing photochemical equipment in terms of photon balances and the importance of methods to quantify photons on the way towards new concepts of photoreactors. A second focus will be on controlling photochemical reactions through utilizing the properties of light, e.g. the switchability or the wavelength dependence, and understanding the implications of a changing light intensity. The third focus will illustrate the benefits of using photochemical reactions for reaction engineering investigations of gas/liquid reactions taking the photochlorination of toluene as an example.

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