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IIT Indore

Dated: 19/01/2024

Advertisement for a Postdoctoral Position Under Indo-German Partnership

Eligibility: Ph.D. in Chemical Sciences/Submitted Doctoral thesis preferably in Organic Synthesis/Catalysis/Photochemistry

Stipend:

Postdoctoral Fellow will be paid a consolidated monthly salary of 1500 Euros and One-time **To & Fro** -1050 Euros

The Postdoc will work with Prof. Burkhard Koenig at University of Regensburg, Germany and the Indian PI would be Dr. Debayan Sarkar. The funding is under the IGP Project- Chemical Innovations For a Sustainable Future funded by UGC, Govt. Of India

Starting Date of the Project – 15th March 2024

Tenure- 1 Year

Field of Research – Attached

Apply directly to Dr. Debayan Sarkar (sarkard@iiti.ac.in) with the latest CV and Two recommendations (one should be from the Ph.D. supervisor) by 5th February 2024.

Prof. Dr. Burkhard König

Project A

Photocatalysis in Water with Enforced Electron-Donor-Acceptor Complexes

Electron donor-acceptor (EDA) complexes can act as chromophores in photocatalysis and allow substrates' activation for the reaction without additional photoredox catalysts. Recently it has been observed that the local surrounding can lead to enforced EDA complex formation, e.g. in enzymatic binding pockets¹ or by dispersion interaction between organic compounds dissolved in water). In the research project we will expand on the initial results of enforced EDA complex formation in aqueous reaction media and develop these into valuable synthetic methods for the light-induced transformation of compounds.

References:

- 1) Emmanuel, M. A., Greenberg, N. R., Oblinsky, D. G., Hyster, T. K. Accessing non-natural reactivity by irradiating nicotinamide-dependent enzymes with light. *Nature* 2016, 540, 414–417.
- 2) M. Giedyk, R. Narobe, S. Weiß, D. Touraud, W. Kunz, B. König, Photocatalytic activation of alkyl chlorides by assembly-promoted single electron transfer in microheterogeneous solutions. *Nat Catal* 2020, 3, 40 – 47.