

SFB – Colloquium

Speaker: **Dr. Shaotang Song**

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Date: Tuesday, 5 December 2023, 16:00, H34

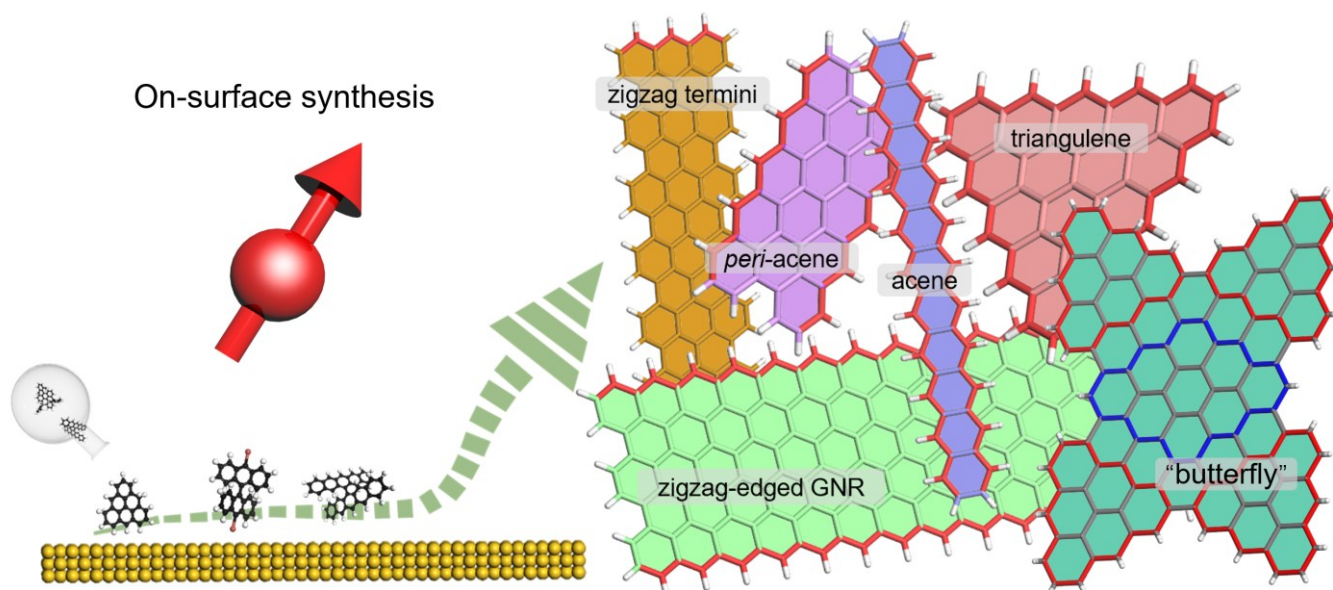
Topic: Designer Magnetic Nanographene

Abstract:

Quantum spins in solids are usually associated with d- or f-block elements, such as Fe, Ni, and Co, etc. The carbon-based spin has gained increased interests since the isolation of graphene, which is a very promising spin channel material owing to its achievement of room-temperature spin transport as well as long spin coherent lifetime. Moreover, graphene nanostructures possess tremendous interesting physical properties that also make it very attractive for spintronics, including gate-tunable carrier concentration and high electronic mobility.

My presentation will showcase the on-surface synthesis of a series of carbon-based spin systems from a designer's perspective. These systems include monoradical species, polyradical nanographene, and magnetic graphene nanoribbons. Additionally, we demonstrate that some of the correlated spin systems can be probed by nickelocene functionalized scanning tunnelling microscope tip as a single molecule spin sensor.

Host: Prof. Dr. Franz J. Gießibl



Rational design and on-surface synthesis of carbon-based spin systems.