Mathematisch-Naturwissenschaftliche Fakultät der Universität zu Köln - Der Dekan -



Einladung

zu dem am Donnerstag, dem 11. Mai 2023, ab 14 Uhr im Kurt-Alder-Hörsaal Chemische Institute, Greinstraße 6

stattfindenden öffentlichen

## wissenschaftlichen Vortrag zur Habilitation

Institut für Anorganische Chemie (Fach: Anorganische Chemie) von

## Dr. Hajar Maleki

über das Thema

## Hydrogen: A Therapeutic Drug

The inherent biosafety of hydrogen (H2) makes it an attractive treatment option for multiple diseases. Recent studies on animal models and clinical trials have revealed the antioxidant, antiinflammatory, and anti-tumor functions of H2. However, since the ingestion and inhalation of H2 are technically very challenging and inefficient, it is necessary to design approaches for targeted H2 delivery through precision medicine. By designing ultrasmall nanoparticles as H2 gas nanocatalysts or nanogenerators and their active and passive targeting possibilities, H2 gas can be selectively and efficiently generated or released in the disease sites with enhanced therapeutic effects with minimum damage to the normal cells. In this talk, I will unravel the combining of H2 therapy with various nanomaterials as an exciting approach for the future treatment of different types of diseases.

> G. Bareth Dekan