Special Issue

State-of-the-Art Ultra-Low Field Techniques and Magnetic Nanoprobe for the Application on Biochemistry

Message from the Guest Editors

Magnetic nanoprobes have great potential in biochemical applications, because of their biocompatibility, magnetism responsiveness, and favorable biomolecule-comparable sizes. The development of ultra-low field (ULF) techniques allows for the direct detection of in situ magnetic nanoprobes because of the low magnetic background of biological samples, which enables highly sensitive sensing and imaging. Recent developments of ULF techniques include giant magnetoresistance sensors, superconducting quantum interference devices, atomic magnetometers and magnetic particle imaging, among others. The precise determination of the position and quantity of the magnetic nanoprobes is critical for their chemical and biological applications. This Special Issue aims to provide a broad overview of the most recent developments in ULF techniques and magnetic nanoprobes for their application in biochemistry. Contributions (including full papers, communications and reviews) concerning reports or overviews on new methodologies, techniques, or materials in the biochemical applications of ULF techniques or magnetic nanoprobes are welcome.

Guest Editors

Prof. Dr. Li Yao

Institute of Chemistry Chinese Academy of Sciences, Zhongguancun North First Street 2, Beijing 100190, China

Prof. Dr. Jianfeng Zeng

School of Radiation Medicine and Protection, Suzhou Medical College of Soochow University, Suzhou, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
molecules@mdpi.com

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As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt
Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

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