Seminar über Ultrafast Science and Technology

Referent/in:  Prof. Dr. Joo-Hiuk Son, Dept. of Physics, University of Seoul

Titel: Manipulation of Biomolecules using Terahertz Radiation for Potential Cancer Treatment

Carcinogenesis involves DNA methylation, which is a primary alteration in DNA in the development of cancer occurring before genetic mutation. Because the abnormal DNA methylation is found in most of cancer cells, the detection and manipulation of DNA methylation using terahertz radiation can be a novel pioneering method in cancer study. The DNA methylation has been directly observed by terahertz spectroscopy at around 1.65 THz and this epigenetic chemical change could be manipulated to the state of demethylation using a resonant high-power terahertz radiation. Demethylation of cancer DNA is a key problem in epigenetic cancer therapy and our results show a potential for terahertz radiation to be applicable to the treatment of cancer.

Zeit: Montag, 08.04.2019, 14:00 Uhr

Ort: Hörsaal B78, Gebäude Exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz