



Berliner Physikalisches Kolloquium

im Magnus-Haus, Am Kupfergraben 7, 10117 Berlin

Eine gemeinsame Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V. (PGzB), der Freien Universität Berlin (FUB), der Humboldt-Universität zu Berlin (HUB), der Technischen Universität Berlin (TUB) und der Universität Potsdam (UP), gefördert durch die Wilhelm und Else Heraeus-Stiftung.

Am Donnerstag, dem **4. Februar 2016**, um **18:30 Uhr**

spricht

Prof. Dr. Henry Chapman
Abteilung Kohärente Röntgenbildgebung, Center for Free-Electron Laser Science, Deutsches Elektronen Synchrotron Hamburg und Universität Hamburg

über das Thema

„Imaging macromolecules with x-ray laser pulses“

Moderation: Karsten Heyne (FU Berlin)

X-ray science, and structure determination in particular, has continuously developed since 1895 with an increase in source brightness over that time of about 30 orders of magnitude. The development has culminated in large accelerator-driven radiation sources such as undulators and free-electron lasers. The bright laser-like beams from these sources have precipitated methodological advances for imaging complex forms of matter, such as biological macromolecules or man-made nanostructures. An understanding of how to synthesize atomic-resolution images was developed 100 years ago by Bragg and still forms the basis for ongoing research in structure determination and coherent imaging, but in ways that perhaps Bragg would not have imagined. Our ambitions are to use these new capabilities to overcome bottlenecks in macro-molecular imaging and to form ultrafast snapshots of molecules in action, to piece together their motions and reactions.