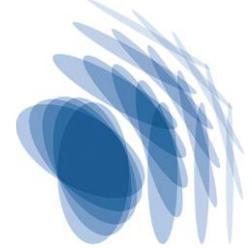


# Max-Planck-Institut für Struktur und Dynamik der Materie

Max Planck Institute for the Structure and Dynamics of Matter



IMPRS UFAST Call for PhD applications 2020/2021



**Compton X-ray Microscopy**

**H. Chapman-2**

<b>Title of PhD Project</b>	<b>Compton X-ray Microscopy</b>
<b>Type</b>	Experimental
<b>Supervisor(s)</b>	Prof. Henry Chapman Dr. Saša Bajt
<b>Affiliation(s):</b>	Universität Hamburg, DESY
<b>Number of positions:</b>	1
<b>Abstract:</b>	An X-ray photon energy of 60 keV provides the greatest signal for X-ray microscopy for a given X-ray dose (and hence damage) to biological material. This project will make use of and further optimise novel X-ray lenses not previously available, to develop high-resolution low-dose X-ray microscopy via Compton scattering. This involves characterising the imaging properties of such a microscope and determining optimum strategies to achieve 3D images of cells. The PhD candidate should possess a strong interest in optics and imaging, wavefront sensing, and be capable of programming and performing data visualisation.
<b>Contact person for scientific questions about the project:</b>	Henry Chapman: <a href="mailto:henry.chapman@cfel.de">henry.chapman@cfel.de</a>

