
UNCOVERING NEW TRANSPORT REGIMES AND LIGHT-INDUCED PHASES IN QUANTUM MATERIALS

**Virtual Colloquium featuring Margaret Murnane,
recipient of the 2021 Benjamin Franklin Medal in Physics**



*Dr. Margaret Murnane and
Dr. Henry Kapteyn will be
presented with the 2021 Benjamin
Franklin Medal in Physics for their
pioneering innovations that have
made high-intensity, coherent,
tabletop x-ray sources practical for
the study of a broad range of
ultrafast processes.*

**The Franklin Institute Awards
Virtual Ceremony
Thursday, April 29, 2021
For details, visit
www.fi.edu/awards**

DATE: WEDNESDAY, APRIL 21, 2021

TIME: 3:00–4:00 PM

ATTEND: Contact Beth Scheraga at bscheraga@fi.edu
for Zoom link

High harmonic generation (HHG) is a unique quantum light source with fundamentally new capabilities, by up-converting femtosecond lasers to very short wavelengths. This produces fully spatially and temporally coherent laser-like beams with linear or circular polarization throughout the extreme ultraviolet (EUV) and soft X-ray regions, all on a tabletop. These characteristics are ideal for capturing the coupled atomic, electronic, chemical, magnetic and structural orders, as well as transport/mechanical properties in materials. Dr. Murnane will discuss applications of this new light source in nanoscience and nanotechnology, including understanding how nanoscale energy flow differs from bulk, how light can be used to tune the electronic or magnetic state of a material, and how to build perfect X-ray microscopes that can peer through buried interfaces or image spin textures in 3D.

