Hamburg Photon Science Colloquium

FRUSTRATED QUANTUM DEVICES: PATHWAYS TO LEVERAGE COMPLEXITY

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Materials with complex interactions are of significant fundamental interest, not least because of their connection to unconventional superconductivity and quantum magnetism. One characteristic of such systems is the presence of “frustration” - a way of describing that different energy scales compete closely to set the ground state of the system. Here, we explore how this manifests in the response of these materials when driven out of equilibrium by applied currents. We demonstrate how magnetic and charge textures can be electrically manipulated, revealing interesting insights about their underlying physics and perhaps suggesting possible applications in novel quantum technologies.

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2:00 PM

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