

Dynamics of driven impurities in a quantum gas

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The problem of a quantum impurity in a Fermi gas is fundamental in physics, with relevance ranging from atomic gases to doped semiconductors to neutron stars. I will discuss the behavior of impurities with internal spin states coupled by a continuous Rabi drive, a scenario that is readily realised in cold-atom experiments. I will show how this reveals quantum many-body phenomena such as the orthogonality catastrophe and magnetic phases.

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