

How to dress RF photons with tunable momentum, and magnetic spin-orbit coupling

W. Ketterle

*Research Laboratory for Electronics, MIT-Harvard Center for Ultracold Atoms, and
Department of Physics, Massachusetts Institute of Technology*

E-mail: `ketterle@mit.edu`

The properties of ultracold atoms can be profoundly modified with the help of laser beams. They can couple spin and motion and turn a Bose-Einstein condensate into a supersolid. A powerful method is periodic modulation of potentials (Floquet engineering). I will illustrate this method by showing how a modulated magnetic field can dress radiofrequency photons with tunable momentum.