

# PHYSICAL CHEMISTRY SEMINAR



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Monday, April 4, 2022  
4:00 PM  
Young Hall 2033

## “Attosecond Science and its Applications to Atomic, Molecular, and Chemical Physics”



**Abstract:** Over the last 20 years, there has been tremendous progress in the ability to generate attosecond light pulses.<sup>1</sup> The application of this new capability to chemistry represents a frontier area in chemical physics. In this lecture, the technology used to generate and characterize attosecond pulses will be described, followed by two applications: attosecond photochemistry, in which a visible or UV pulse electronically excites a molecule and attosecond transient absorption is used to follow the ensuing dynamics,<sup>2</sup> and attosecond four-wave mixing, in which non-collinear attosecond XUV and few-fs near IR pulses are combined to separate quantum pathways in highly excited electronic states of atoms and molecules.