

■ Invited speaker

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Merging electronics with high-harmonic generation from solids

Abstract

High harmonic and attosecond pulse generation has been extensively developed in gases.

Recently it has been shown that a similar process occurs in solids.

This opens the possibility to use electronic methods to control harmonics and strong field methods to study solids.

I will discuss the synergy between gas and solid harmonic generation and the potential to merge solid state harmonics with electronics.

About the Author

Paul Corkum (OC, FRS, FRSC, FRSP) graduated from Lehigh University, Bethlehem, PA, in 1972 with a Ph. D. in theoretical physics. In 1973 he joined the staff of the National Research Council of Canada where he built one of the world's most famous groups working on the interaction of very short light pulses with matter. Corkum is best known for introducing many of the concepts of how intense light pulses interact with atoms, molecules and solids, and then confirming the concepts experimentally. He was the first to show how to make and measure an attosecond pulse and how this new technology could be used to image atomic-scale structure.

Corkum holds a Canada Research Chair at the University of Ottawa and directs the Joint NRC/University of Ottawa Attosecond Science Laboratory. He is a member of the Royal Societies of London and of Canada and also a foreign member of the US National Academy of Science, the Austrian Academy of Science, and the Russian Academy of Sciences.