

OP533 " Perspectives in XUV and attosecond science in condensed matter "

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Parrainage ou lien avec des sociétés savantes, des GDR ou autres structures :

GDR Ultrafast Phenomena, GDR REST

Résumé

The emergence of attosecond science is currently pushing the limit of our understanding of charge dynamics on the atomic length scale. Initially developed in gas phase experiments, the field is currently enlarging to the investigation of condensed matter where new challenges arise. This mini-workshop aims at bringing together theoretical and experimental specialists of highly non-linear laser-matter interaction, dynamics in solids, liquids and from the field of XUV attosecond optics to establish the current state of the art and gather interest of the community. The topics discussed in the workshop will include, without being restricted to, high order harmonic generation in solid and liquids, photoemission processes on the attosecond timescale from surfaces, crystals and liquids and XUV induced processes. These new approaches will allow to probe phase transitions, charge and spin dynamics, non-linear interaction, quantum coherences and scattering.

Several groups are identified that are interested in these topics including: physicists participating in the GdRs UP, REST, groups from ILM-Univ Lyon, Univ Cergy, LPS-Univ Paris Saclay, CELIA-bordeaux, IPR-Univ Rennes, IPCMS-Univ Strasbourg, , LYDIL-Paris Saclay.

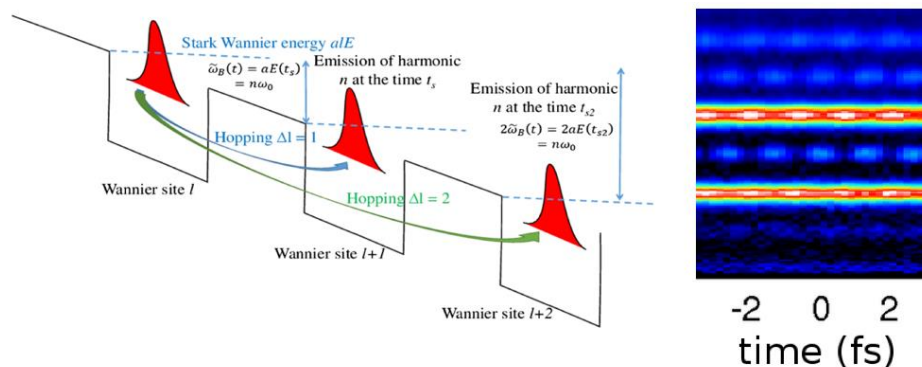


Figure (left) Schematic of the physical process leading to intraband high order harmonic generation. (right) Attosecond interferometry measurements of photoemission time.

Références :

- F. Catoire et al. Phys. Rev. Lett. 121, 143902 (2018).
- S. Ghimire et al. Nat. Phys. 7, 138 (2011).
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