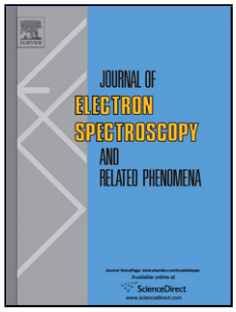

Title: Space-charge effects in high-energy photoemission

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Highlights for the manuscript “Space-charge effects in high-energy photoemission”:

- N-body simulations of interacting photoelectrons in hard X-ray experiments.
- Secondary electrons have a pivotal role in determining the energy broadening.
- Space charge has negligible effects on the photoelectron momentum distribution.
- A simple model provides the characteristic time for energy-broadening mechanism.
- The feasibility of time-resolved high-energy experiments with FELs is discussed.