Studies of Complex Systems from Within

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We have investigated with unprecedented levels of detail, processes and phenomena involving K-shell photodetachment of atoms, molecules, clusters and their negative ions using the brightness, spectral resolution, tunability and polarization of the ALS. During this seminar, we will report on high resolution photoelectron spectroscopic investigations carried out in molecules [1], electron spin-polarization measurements carried out in molecules [2], and K-shell photodetachment of fundamental atomic targets such as Li^- [3], He^- [4] as well as updates on more recent theoretical and experimental development, such as studies of photofragmentation dynamics of small clusters.

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[2] G. Turrri, G. Snell, B. Langer, M. Martins, E. Kukk, S. E. Canton, R. C. Bilodeau, N. Cherepkov, J. D. Bozek, and N. Berrah, "Probing the Molecular Environment using Spin-Resolved Photoelectron Spectroscopy" Phys. Rev. Lett. **92**, 013001 (2004).

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