Real-time dynamics of impurities in helium nano droplets
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I will present results of a series of simulations [1-7] obtained within TDDFT on the real time dynamics of neutral atoms and cations immersed in helium nano droplets, comparing them with experiments whenever possible. Potential applications and limitations of the method will be discussed.

4. - D. Mateo et al, JCP 140, 131101 (2014)
5. - von Vangerow et al, JPC A 118, 6604 (2014)
7. - A. Leal et al, PRB 90, 224518 (2014)

Dynamic evolution of a Ba⁺ cation (green) immersed in a ⁴He_{1000} droplet. On top of it, near the center of the droplet, it can be seen a vortex ring nucleated during the sinking of the cation produced by photoionization of a neutral Ba atom at the surface of the droplet.