INTENCE PULSED HELIUM DROPLET BEAMS

MIKHAIL N. SLIPCHENKO, ANDREY F. VILESOV , *Department of Chemistry, University of Southern California, Los Angeles, CA 90089, USA*; SUSUMU KUMA and TAKAMASA MOMOSE, *Division of Chemistry, Graduate School of Science, Kyoto University, Kyoto, 605-8502, Japan*.

Pulsed (Δt $\approx$ 20-100 μs) nozzle beams have been used to generate helium droplets($\langle$N$\rangle$=10^4-10^5). The dependence of the beam intensity and the mean droplet size on the source stagnation pressure and temperature are studied via mass spectroscopy and laser induced fluorescence of embedded phthalocyanine molecules. In comparison to a cw beam the pulsed source for the same source pressure and temperature has a factor of 100 higher flux, the droplets are an order of a magnitude larger.