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**Desorption and Dissociation of Water Induced by Photoexcitation of Silver Nanoparticles** DINKO CHAKAROV, Department of Applied Physics, Chalmers University of Technology, HANS FREDRIKSSON — The photodesorption and photodissociation of water from silver nanoparticles grown in situ on graphite has been studied by HREELS, TPD and PID. We discuss the factors which influence dissociative versus associative desorption pathways when the system is irradiated with cw and ns pulsed UV light. The observations are attributed to increased optical absorption and hot electron production at the Ag clusters and their vicinity due to particle plasmon excitations.

Dinko Chakarov  
Department of Applied Physics, Chalmers University of Technology

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