

Abstract Submitted
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Investigation of water-graphite interaction using molecular beam technique. NOBUYA MIYOSHI, SHOHEI HODOTA, KENICHI OSUKA, IKUYA KINEFUCHI, SHU TAKAGI, YOICHIRO MATSUMOTO, The University of Tokyo, Department of mechanical engineering — We have investigated water scattering from a graphite surface using the molecular beam technique. The time-of-flight and angular distributions of the scattered molecules were measured at the incident energy lower than 100 meV with the surface temperature of 300 K. As the incident energy decreases from 35 to 130 meV, adsorption-desorption component increases in the time-of-flight distributions. At the incident energy of 35 meV, the angular flux distribution deviates from lobular pattern and approaches to cosine distribution. The final energy of the scattered molecules at the incident energy of 35 meV becomes less dependent on the scattering angle than at the incident energy of 130 meV. These results confirm that the reduction of the incident energy from 130 to 35 meV enhances the accommodation of water molecule to graphite surface.

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