Hiroshi Onishi

Kobe University, Department of Chemistry

【E-mail】**oni@kobe-u.ac.jp**

【Speciality】**chmiestry at interfaces**

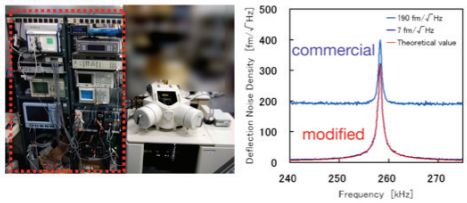
【Keywords】**scanning probes, photon-based spectroscopy**

【Research Subject】**Scanning Probe Study of Highly-integrated Nanomaterials**

Research Group Activity

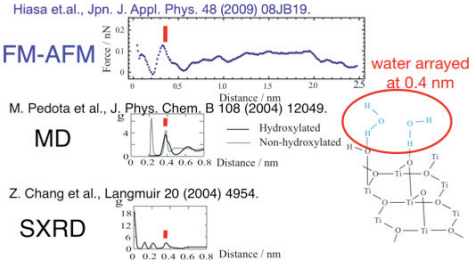
An FM-AFM for low-Q operations

10^4 in vacuum, 300 in air, 3 in water



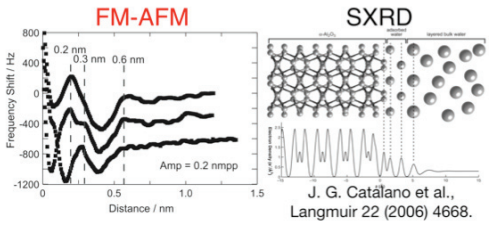
A low-noise cantilever deflection sensor has been developed in the colaboration with Shimadzu Co. and Kyoto Univ.

Water arrayed on TiO_2(110)



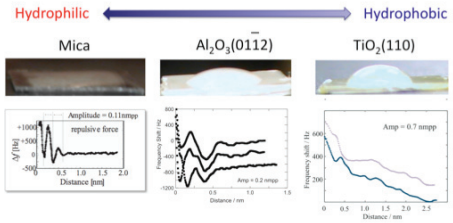
The force-distance curves agreed with the occupation probabilities of water simulated by MD and determined by surface x-ray diffraction.

α-Al_2O_3(012) in 1 M KCl solution



The force-distance curves agreed with the occupation probabity of water determined by surface x-ray diffraction.

Solvent structure over different oxides



The macroscopic hydrophilic property of the three oxides was in an order of (more hydrophilic) mica, Al_2O_3, and TiO_2 (less hydrophilic). The microscopic water structures are related to the hydrophilic property of each oxide.