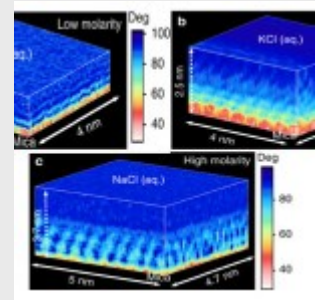


Atomically Resolved Three-dimensional Structures of Electrolyte Aqueous Solutions Near a Solid Surface

Article: published in [Nature Communications](#) by [Pedro Tarazona](#), Department of Theoretical Condensed Matter Physics and IFIMAC researcher.



In a collaboration with experimental and theoretical groups of the ICMM-CSIC and IFIMAC-UAM, this paper presents novel experimental results obtained with a three dimensional atomic force microscopy scanning (3D-AFM) taken within a salt-water solution near a mica surface. The atomic resolution of the 3D-AFM uncovers a crystal like structure within the liquid, which propagates from the mica, in structured layers, up to several nanometers. The theoretical analysis, based on a classical density functional description of the liquid mixture, provides the hints to understand a phenomenon which may be of relevance in a large variety of fields, from surface electrochemistry to molecular and cell biology. [\[Full article\]](#)