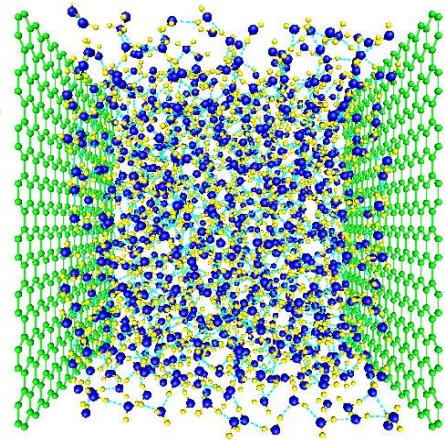


Versió en anglès:

### ***Proton transfer in constrained aqueous systems***

PhD. thesis will follow from current research carried out in the *Grup de Recerca en Simulació per Ordinador en Matèria Condensada (Dept. De Física i Enginyeria Nuclear UPC – Dept. De Física Fonamental UB)* within the study of **microscopic molecular liquids** (especially water and aqueous solutions) **under extreme confinement**, ranging from ambient to supercritical fluids. As an example, a configuration of liquid water confined within a graphite slab is shown in the picture at right.

The most novel part of the research will be devoted to the study of **proton transfer processes in confined liquids**. In the particular case of pure liquid water, the two relevant structures are the so called Zundel dimer and the hydronium or Eigen complex.



Candidates' profile: Physicists and chemists, especially from the areas of Condensed Matter and Chemical Physics, respectively. It is very important the knowledge and ability in numerical calculation procedures as well as programming languages such as FORTRAN or C.