

16 de MARZO de 2022

12.00 h

Sala de Grados
Facultad de Ciencias

INMA

Impulso



Nanophononics: A perspective in Information and Communication Technologies

Clivia M. Sotomayor Torres

**Phononic and Photonics Nanostructures Group
ICREA and Catalan Institute of Nanoscience
and Nanotechnology**

We are familiar with electrons as we use computers, with photonics, since we use the internet and local and regional networks, and have some awareness of spins being used in memory devices. Less familiar with phonons, which are usually regarded as a problem.

In this talk I will introduce phonons as state variable and as a possible alternative to electronic charge, photons and spins for information generation, transmission, processing and storage, either on their own right or as hybrids combined with either token of information. I will discuss current research questions, challenges and progress in the quest to reduce the energy in ICT processes.