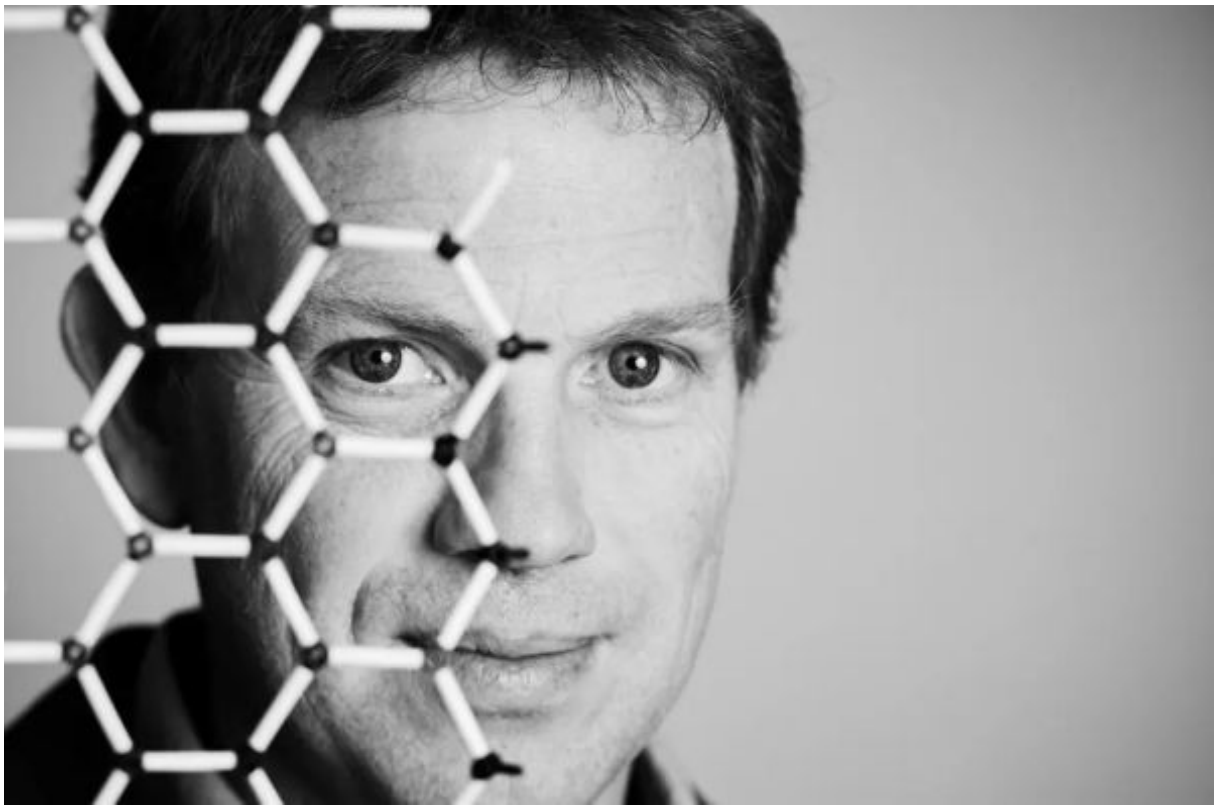

Prof Frank Koppens named American Physical Society Fellow for 2022

Nominated for pioneering work in the science and applications of 2D material optoelectronics, quantum photonics, and nano-photonics

October 21, 2022

ICREA Prof at ICFO Dr Frank Koppens has recently been elected fellow of the American Physical Society for 2022 for i¿½**pioneering work in the science and applications of 2D material optoelectronics, quantum photonics, and nano-photonics.This includes the demonstration of record-strong compression of light, the control and detection of 2D polaritons, and the creation of broadband and ultrafast photodetectors**i¿½.

The APS Fellowship Program was created to recognize members of the physics communit who have made exceptional contributions to the physics enterprise in physics research important applications of physics, leadership in or service to physics, or significan contributions to physics education. Each year, no more than one half of one percent of th Society's membership (excluding student members) is elected by their peers to the status o APS Fellow

Prof Koppens leads the quantum nano-optoelectronics group at ICFO, studying the basic science and applications of quantum materials. Quantum materials have the potential to be transformational for a plethora of areas in science and technology, such as beyond-Moore, neuromorphic computing, energy, IoT, industry 4.0 and robotics. In particular, the group uses two-dimensional materials that are only one atom thick. These materials exhibit fascinating properties and in particular, by building stacks of these layered materials completely new material systems can be created atom-by-atom: atomic lego! One of th focus areas is twisted two-dimensional materials, as a unique platform for controlling ne and exotic phases of matter in real quantum materials

The group applies several unique and novel imaging techniques to study fundamenta light-matter interactions at the nanoscale. In addition to the new science and physics, th group develops new concepts for photo-detection, imaging systems, nano-scale ligh processing and switching, as well as flexible and wearable health and fitness devices Koppens is vice-chair of the Graphene Flagship executive board, and works with larg industries worldwide. Koppens is co-founder of the spinoff company Qurv. Qurv develop graphene-based wide-spectrum image sensor technologies and integrated solutions t enable enhanced computer vision applications, addressing the expanding needs of a autonomous and intelligent new world.