

# Big ideas for light and materials workshop



28.Mayo - 31.Mayo 2024

Cód. Z05-24

Mod.:

Presencial

Edición

2024

Tipo de actividad

Workshop

Fecha

28.Mayo - 31.Mayo 2024

Ubicación

Palacio Miramar

**Idiomas** 

Inglés

Validez académica

40 horas

**DIRECCIÓN** 

Angel Rubio, UPV/EHU

Comité Organizador











### Descripción

The Max Planck Institute for the Structure and Dynamics of Matter in Hamburg and the Max Planck Institute for Polymer Research in Mainz together with the Columbia University and the Center for Computational Quantum Physics at the Flatiron Institute have successfully launched a joint enterprise: the "Max Planck-New York City Center on Non-Equilibrium Quantum Phenomena". The center was officially inaugurated by all four partner organizations on November 18, 2019 at Columbia University, USA.

The Center's ambitious collaborative effort aims to understand, control, and manipulate the uniquely useful properties of quantum materials and the *control of non-equilibrium quantum phenomena in complex materials*. We especially focus on applications of non-linear light-matter coupling that result in phases with no equilibrium counterparts i.e. strong coupling of light and matter; dynamical control of materials properties and chemical reactions; design of photo-susceptible materials.

In 2024 and to commemorate the finalization of the first funding period of the center, we are organizing a Big Ideas workshop on the future of Light, Spectroscopy, and Quantum Materials.

#### The time is right to address the question:

# Can we capitalize on light manipulation, materials, and quantum optics advances to create a new era in Quantum Science?

We will bring together current and future leaders working in distinct areas, including novel spectroscopic and theoretical tools, artificial lattices of matter and light, quantum optics, and materials.

The workshop will include half-hour talks along with another half-hour of discussion. Each day concludes with a panel to discuss and brainstorm on how these approaches can come together to shape future scientific and technological advances

The event will take place in Palace Miramar, San Sebastian, from Tuesday, May 28th (arrival May 27th) until Friday, May 31st, 2024.

#### **Scientific Organizing Committee:**

Andrea Cavalleri (MPSD), Andrew Millis (CCQ), Angel Rubio (MPSD & CCQ), and Kenneth Burch (Boston College)

#### **Objetivos**

Provide a platform to facilitate discussion among members and collaborators of the center on the topic of manipulation of light, materials, and advances in quantum optics in the new era of Quantum Science

#### Colabora







### Dirigido por:



**Angel Rubio** 

UPV/EHU

Angel Rubio is is the managing director of the Max Planck Institute for the Structure and Dynamics of Matter and the director of its theory department. He is a distinguished Research Scientist at the Flatiron institute's Center for Computational Quantum Physics distinguished as well as Professor of physics at the University of the Basque Country and the University of Hamburg. Rubio's research focuses on the modeling and theory of electronic and structural properties of condensed matter. He is working on developing novel theoretical tools, such as time-dependent functional theory for quantum electrodynamics and computational codes for the ab initio description and control of the dynamics of decoherence and dissipation in quantum many-body systems, and on characterizing new nonequilibrium states of matter.

# Precios matrícula

MATRÍCULA	HASTA 28-05-2024
General	0 EUR

# Lugar

### Palacio Miramar

 $P^{\underline{o}}$  de Miraconcha n $^{\underline{o}}$ 48. Donostia / San Sebastián

Gipuzkoa