

## SCOM 2021 program

Invited talk	Contributed talk
General	Break

Monday	26-apr	Speaker	Title
9:00-9:15 Opening			
9:15-9:50	Invited 1	Franco Nori	Quantum Nonlinear Optics without Photons, how to excite two or more atoms simultaneously with a single photon, and other unusual properties of ultra-strongly-coupled QED systems
9:50-10:10	Contributed 1	David Zueco	Strong coupling of magnetic molecules to superconducting circuits and its application in quantum technologies
10:10-10:45	Invited 2	Jerome Faist	Engineering vacuum fields with metamaterials: effects of non-locality and breaking time-reversal symmetry
10:45-11:00 Break			
11:00-11:35	Invited 3	Ido Kaminer	Strong Coupling by Nonlocal Light-Matter Interactions
11:35-11:55	Contributed 2	Girish Lakhwani	Organic Polariton Lasing with Molecularly Isolated Perylene Diimides
11:55-12:15	Contributed 3	Marco Dusel	Room temperature organic exciton-polariton condensate and topological polariton laser in a lattice
12:15-13:30 Break			
13:30-14:05	Invited 4	Päivi Törmä	Polarization textures, correlations and sub-picosecond thermalization of Bose-Einstein condensates in strongly coupled plasmonic lattices
14:05-14:25	Contributed 5	Jan Lüttgens	Radiative Pumping of Exciton-Polaritons by Luminescent sp <sup>3</sup> Defects in Single-Walled Carbon Nanotubes
14:25-14:45	Contributed 6	Lars Mewes	Energy relaxation in molecular cQED systems: Insights from coherent two-dimensional spectroscopy
14:45-15:05	Contributed 4	Thilo Stöferle	Polariton condensation in a 2D Lieb lattice with a tunable microcavity at room temperature
15:05-15:30 Break			
15:30-16:05	Invited 5	Mikhail Noginov	Control of Physical Phenomena with Nonlocal Metal-Dielectric Environments
16:05-16:25	Contributed 7	Ora Bitton	Vacuum Rabi splitting of bright and dark plasmonic cavity modes in the limit of a single quantum emitter
16:25-17:00	Invited 6	Wei Xiong	Ultrafast Dynamics and Interactions of Molecular Vibrational Polaritons
17:00-17:20 Break			
17:20-18:20 Roundtable discussion: Ultrastrong coupling. Moderator: Bill Barnes			
18:20-18:30 Break			
18:30-20:00 Poster session			

Tuesday	27-apr	Speaker	Title
9:00-9:35	Invited 7	Thomas Ebbesen	Chemical and material properties under strong coupling
9:35-9:55	Contributed 8	Kenji Hirai	Vibrational Strong Coupling in Organic Reactions and Self-assembly
9:55-10:30	Invited 8	Jenny Clark	Triplet-triplet annihilation in films, crystals and microcavities
10:30-10:45	Break		
10:45-11:20	Invited 9	Ruben Esteban	Bringing optomechanics to the molecular scale
11:20-11:40	Contributed 9	Gerrit Groenhof	Multi-Scale Molecular Dynamics Simulations of Molecular Ensembles Strongly Coupled to Low-Quality Dispersive Optical Cavities
11:40-12:00	Contributed 10	Jussi Toppari	Effect of molecular Stokes shift on polariton dynamics
12:00-12:20	Contributed 11	Tomasz Antosiewicz	Nanoscale polaritons in a first-principles picture
12:20-13:30	Break		
13:30-14:05	Invited 10	Johannes Feist	Ultrafast molecular polaritonics in lossy plasmonic & hybrid cavities
14:05-14:25	Contributed 12	Markus Kowalewski	Controlling the photostability of molecules with optical cavities -- the role non-adiabatic dynamics and dissipation
14:25-14:45	Contributed 13	Matthijs Berghuis	Enhancing triplet fusion in tetracene crystals by strong light-matter coupling
14:45-15:30	Break		
15:30-16:05	Invited 11	Matthew Pelton	Room-temperature strong coupling between plasmons and single quantum dots
16:05-16:25	Contributed 14	Felipe Herrera	Chemical reactivity of vibrational polaritons in the ultrastrong coupling regime
16:25-17:00	Invited 12	Stephane Kena-Cohen	Molecular strong coupling and novel structures for manipulating light
17:00-17:15	Break		
17:15-18:15	Roundtable discussion: Polaritonic Chemistry. Moderator: Karl Börjesson		
18:15-18:25	Break		
18:25-20:00	Poster session		

Wednesday	28-apr	Speaker	Title
9:00-9:35	Invited 13	Pavlos Lagoudakis	Polariton Computing: a versatile platform for full logic and analogue simulation
9:35-10:10	Invited 14	Christian Schneider	Room temperature Exciton-Polaritons and their Condensates in Optical Lattices
10:10-10:45	Invited 15	Jonathan Keeling	Modelling Organic polariton condensation: Mean-field and beyond
10:45-11:00	Break		
11:00-11:35	Invited 16	Jeremy Baumberg	Picocavities: Plasmonic Forces at the Picoscale
11:35-11:55	Contributed 15	Kyriacos Georgiou	Strong coupling in organic-semiconductor slab microcavities
11:55-12:20	Contributed 16	Adarsh Vasista	Soft microresonators for molecule-cavity coupling: what, why, and how
12:20-12:40	Contributed 17	Christian Schäfer	Cavity induced inhibition of chemical reactions under resonant vibrational strong coupling from first principles
12:40-13:30	Break		
13:30-14:05	Invited 17	Koen Vandewal	Organic opto-electronics enhanced with weak and strong light-matter coupling
14:05-14:25	Contributed 18	Giovanni Lerario	2D perovskites-based microcavities for spin-orbit photonics
14:25-15:00	Invited 18	Christoph Lienau	Two-dimensional electronic spectroscopy: A powerful tool for probing strong couplings in molecular aggregates
15:00-15:30	Break		
15:30-16:05	Invited 19	Joel Yuen-Zhou	Vibropolaritonic chemistry through dark modes and polariton condensation
16:05-16:25	Contributed 19	Tal Schwartz	Strong Coupling with Intermolecular Terahertz Vibrations in Organic Materials
16:25-16:55	Contributed 20	Blake Simpkins	Strong Vibrational Coupling for Chemical Control and Optical Modulation
16:55-17:10	Break		
17:10-18:10	Roundtable discussion: Polaritonic Condensates. Moderator: Jaime Gómez Rivas		
18:10-18:30	Closing		