

CeNS/MCQST Workshop Venice 2022

Bridging the Gap: Nano Meets Quantum



_	out to Testocalia (Lieu						
Time	Monday, September 19	Time	Tuesday, September 20	Time	Wednesday, September 21	Time	Thursday, September 22 Unraveling the mechanics of a repeat-protein
		09:00	Single-molecule nanocatalysis Peng Chen	09:00	Plasmons as sensor for bio-molecules Carsten Sönnichsen	09:00	nanospring by single molecule optical tweezers Johannes Stigler
10:05	Welcome		Nonlinearity and Dissipation as a Formidable		Breaking Speed and Resolution Limitations of		Giant interactions of
10:15	Shedding Light on Spins: Materials for Quantum Technologies	09:45	Resource in Engineered Quantum Systems Anja Metelmann	09:45	AFM Simon Scheuring	09:45	Rydberg excitons in Cu₂O Julian Heckötter
11:00	Mete Atatüre Coffee break	10:30	Coffee break	10:30	Coffee break	10:30	Coffee break
11:45	Plethora of Many-Body Ground States in Magic Angle Twisted Bilayer Graphene	11:15	Single nanoparticle flow virometer: counting Virus nanoparticles one at a time at high specificity, high sensitivity in minutes Eitan Lerner	11:15	RNA and cations in biomolecular simulations: A highly charged problem Nadine Schwierz	11:15	Exploring life at the single-molecule level Johannes Hohlbein
	Dmitri Efetov				Quantum optics meets microscopy: An ultra-		Nanostructured gates for electrostatic superlattices
12:30	Flow and extraction of energy and charge carriers in hybrid plasmonic nanostructures	12:00	Atomistic defects in 2D materials as quantum emitters Alexander Holleitner	12:00	sensitive microresonator platform by Qlibri Jonathan Noé	12:00	of bosons and fermions in 2D materials Nathan Wilson
12.30	Suljo Linic						
	Lunch (13:15-14:15)		Lunch (12:45-13:45)		Lunch (12:30-13:30)		Lunch (12:30-13:45)
					Light-field control of electrons		
				13:30	in graphene heterojunctions		
		13:45	From Metal to Metal-free Heterogeneous Catalysts: A Journey Into More Sustainable Chemical Processes Paolo Fornasiero		Tobias Boolakee		Quantum sensing of phonons and photons
	Bringing electrostatics to light: Electrometry probes a new dimension at the molecular scale			14:00	Developing spin-based microscopy for magnetic imaging of spin waves	13:45	with strongly driven Josephson resonators Gary Steele
14:15					Toeno van der Sar		
14110		14:30	Poster Flash Talks 1		Novel magnetic materials hosting skyrmions	14:30	Poster Flash Talks 2
	Madhavi Krishnan		O Di-tt-i-l-	14:45	for spintronics		
45.00	A low-noise quantum dot in a one-sided microcavity Richard Warburton		Group Picture outside		Aisha Aqeel		
15:00		4					
15:45	Coffee break	15:00	Posters session 1 & coffee			15:00	Posters session 2 & coffee
	Strong coupling between molecular vibrations						
16:30	and phonon polaritons in van der Waals materials						
	Rainer Hillenbrand		Billion times more sensitive than patch clamp – Single	15:15	Discussions		
17:15	Diamond-based quantum sensors for nano- and microscale magnetic resonance	17:00	molecule measurements of transport reveal ubiquitous off- cycle states that regulate the activity of transporters Dimitrios Stamou			17:00	Counting Molecules in Single Cells Helmut Strey
	Dominik Bucher	17:45	Quantum photonics: interference beyond HOM, entanglement, and quantum networks Stefanie Barz			17:45	Optomagnonics in dispersive media Victor Bittencourt
18:00	Welcome Reception					18:30	Closing Remarks