

MORNING SESSION

8:00 – 8:30 AM: Registration and Breakfast

Location: 375, Physics North Hall

Room 1, Physical North Hall	
Session Chair: Steven Louie <i>University of California at Berkeley/LBNL</i>	
8:30-8:45	Introduction Remarks/Logistics Jeff Neaton <i>LBNL/University of California at Berkeley</i> Irfan Siddiqi <i>University of California at Berkeley</i>
8:45-9:20	Alex Zettl <i>University of California at Berkeley</i> “The single-chain limit of some elements and compounds”
9:20-9:55	James Chelikowsky <i>University of Texas</i> “AI and Quantum Simulations: Pioneering the Discovery and Design of Next-Generation Materials”

9:55-10:40 Break and Symposium Photo

Location: Room 375, Physics North

Room 1, Physical North Hall	
Session Chair: Peter Yu <i>University of California at Berkeley</i>	
10:40-11:15	Rupert Huber <i>University of Regensburg</i> “Electronics faster than a cycle of light”
11:15-11:50	Viola Vogel <i>ETH Zurich</i> “Is there a future for mechano-pharmaceuticals?”
11:50-12:00	Morning Closing Remarks/Logistics

AFTERNOON SESSION

12:00-1:00 PM Lunch

Location: 375, Physics North Hall

Room 2, Physics North Hall		Room 3, Physics North Hall	
Session Chair: Jeffrey Neaton <i>LBNL/University of California at Berkeley</i>		Session Chair: Na Ji <i>University of California at Berkeley</i>	
1:00-1:15	Antonios Alvertis <i>KBR, Inc., NASA Ames Research Center</i> “Superconductivity in SrTiO ₃ via long-range coupling of electrons to multiple longitudinal optical phonons”	1:10-1:30	Xiaowei Zhuang <i>Harvard University</i> , “Illuminating life by genome-scale imaging”
1:15-1:30	Timur Bazhirov <i>Mat3ra.com</i> “From Theory to Innovation: Advancing Quantum Materials and Their Commercial Impact”	1:30-1:50	Ernst Karl-Heinz <i>Empa, Swiss Federal Laboratories for Materials Science and Technology</i> “Magneto-Chiral Phenomena of Helical Aromatics on Surfaces”

1:30-1:45	Hyoungh Joon Choi <i>Yonsei University</i> “Strain effects on the electronic and magnetic properties of altermagnets”	1:50-2:10	Philippe Guyot-Sionnest <i>University of Chicago</i> “Colloidal quantum dots paints for infrared detection and cascade emission”
1:45-2:00	Michel Côté <i>Université de Montréal</i> “Superconductivity in Fullertubes of C ₁₀₀ ”	2:10-2:30	Mikhail Belkin <i>Technical University of Munich</i> , “Intersubband Polaritonic Metasurfaces with Giant Nonlinear Optical Response”
2:00-2:15	Moty Heiblum <i>Weizmann Institute of Science</i> “Unexpected Coherent Interference of Bunched and Debunched Anyons Novel Study in the Fractional Quantum Hall Effect”	2:30-2:50	Chenhao Jin <i>University of California at Santa Barbara</i> “Revealing Hidden Modes in the 2D Flatband with Optical Imaging”
2:15-2:30	Jisoon Ihm <i>University of Ulsan</i> “Classical Analogue to Shor’s Algorithm in Quantum Computers”		
2:30-2:45	Leor Kronik <i>Weizmann Institute of Science</i> “Solving the solid-state band gap and optical absorption problems of density functional theory”		

2:50-3:20 Coffee Break

Location: 375, Physics North

	Room 2, Physics North Hall Session Chair: Leor Kronik <i>Weizmann Institute of Science</i>		Room 3, Physics North Hall Session Chair: Feng Wang <i>University of California at Berkeley</i>
3:20-3:35	Weidong Luo <i>Shanghai Jiao Tong University</i> “Tunable magnetic interactions in mono-transition metal spinels MgCr ₂ X ₄ (X= O,S,Se) and ACr ₂ S ₄ (A=Ca,Sr,Ba)”	3:20-3:40	Tony Heinz <i>Stanford University and SLAC National Accelerator Laboratory</i> “Some surprises in light-matter interactions at surfaces”
3:35-3:50	Vincent Crespi <i>The Pennsylvania State University</i> “The 9th Edition of Introduction to Solid State Physics”	3:40-4:00	Markus Raschke <i>University of Colorado</i> “Turning inwards – or how to maintain international collaborations in an era of rising geopolitical tensions”
3:50-4:05	Susumo Saito <i>Institute of Science Tokyo</i> “Energetics and electronic properties of carbon and hydrogen boride fullerenes: A comparative study”	4:00-5:25	Open Mic Session
4:05-4:20	Jay Sau <i>University of Maryland</i> “Towards topological qubits in semiconductor nanowires: challenges and updates”		
4:20-4:35	Young Woo Son <i>Korea Institute for Advanced Study</i> “Transferable Empirical Pseudopotentials from Machine Learning”		

4:35-4:50	Renata Wentzcovitch <i>Columbia University</i> “Modeling Earth from Atomic to Global Scale”		
4:50-5:10	Peihong Zhang <i>University at Buffalo, SUNY</i> “Stacking up Electron-Rich and Electron-Deficient Monolayers to Achieve Extraordinary Mid- to Far-Infrared Excitonic Absorption”		
5:10-5:25	Shengbai Zhang <i>Rensselaer Polytechnic Institute</i> “Bond Dipole-Based Geometric Theory of Band Alignment”		

EVENING SESSIONS

6:30-10:00 PM: Dinner and Short Presentations

Dinner Location: **Pacific Lighthouse Restaurant**

1051 Pacific Marina, Alameda, CA 94501

Dinner Presentations:

Steven Louie, Peter Yu, James Chelikowsky, Feng Wang, Moty Heilblum, Michael Loy, Phil Allen, Leeor Kronik, Ricardo Zucca, Na Ji, Marvin Cohen, Ron Shen