

## Workshop on Quasi-particle Dynamics in Quantum Confined and Emerging Materials

Sponsored by the Columbia University MRSEC

July 14<sup>th</sup>, 2017

Time	Title	Name
9:00-10:00	Plenary Lecture 1 – [Hot] carrier multiplication in graphene	Prof. Dr. Mischa Bonn Max-Planck-Institute – Mainz
10:00-10:20	Microscopic origin of singlet fission	Roel Tempelaar- Reichman group
10:20-10:40	Theory of the Benyamin/Dean/Pasupathy 2D superconductor with a current drive	- Millis group
10:40 – 11:00	Superatom molecules and solids	Anouck Champsaur – Nuckolls group
11:00 – 11:20	Superatomic analogs of 2D materials	Bonnie Choi - Roy group
11:20 – 11:40	Low temperature nano-imaging of charge dynamics in 2D materials	Alex McLeod – Basov group
11:40 - 12:00	Superconductivity (possible) in terphenyl	Jia Chen - Millis/ Reichman groups
12:00 – 1:00	Lunch break	
1:00 – 2:00	Plenary Lecture 2 – 2D transport (or something like that)	Prof. Philip Kim Harvard University
2:00 – 2:20	Ambipolar Landau levels and strong exchange-enhanced Zeeman energy in monolayer WSe <sub>2</sub>	Martin Gustafsson, Matt Yankowitz – Dean, Zhu, Hone groups
2:20 – 2:40	Time-domain view of polariton condensates in lead halide perovskite nanowires	Andrew Schlaus, Tyler Evans, Michael Spencer – Zhu group
2:40 - 3:00	Coffee break	
3:00 – 3:20	Polaron dynamics in lead halide perovskites	Kiyoshi Miyata, Prakriti Joshi – Zhu group
3:20 – 3:40	Magnetism of defects in TMD semiconductors	Zurab/Drew – Pasupathy group
3:40 – 4:00	Exciton-condensate in double layer graphene	Leo- Dean Group
4:00 – 5:00	Plenary Lecture 3 – Non equilibrium driven phenomena in 2D materials from first principles	Prof. Dr. Angel Rubio Max-Planck-Institute – Hamburg