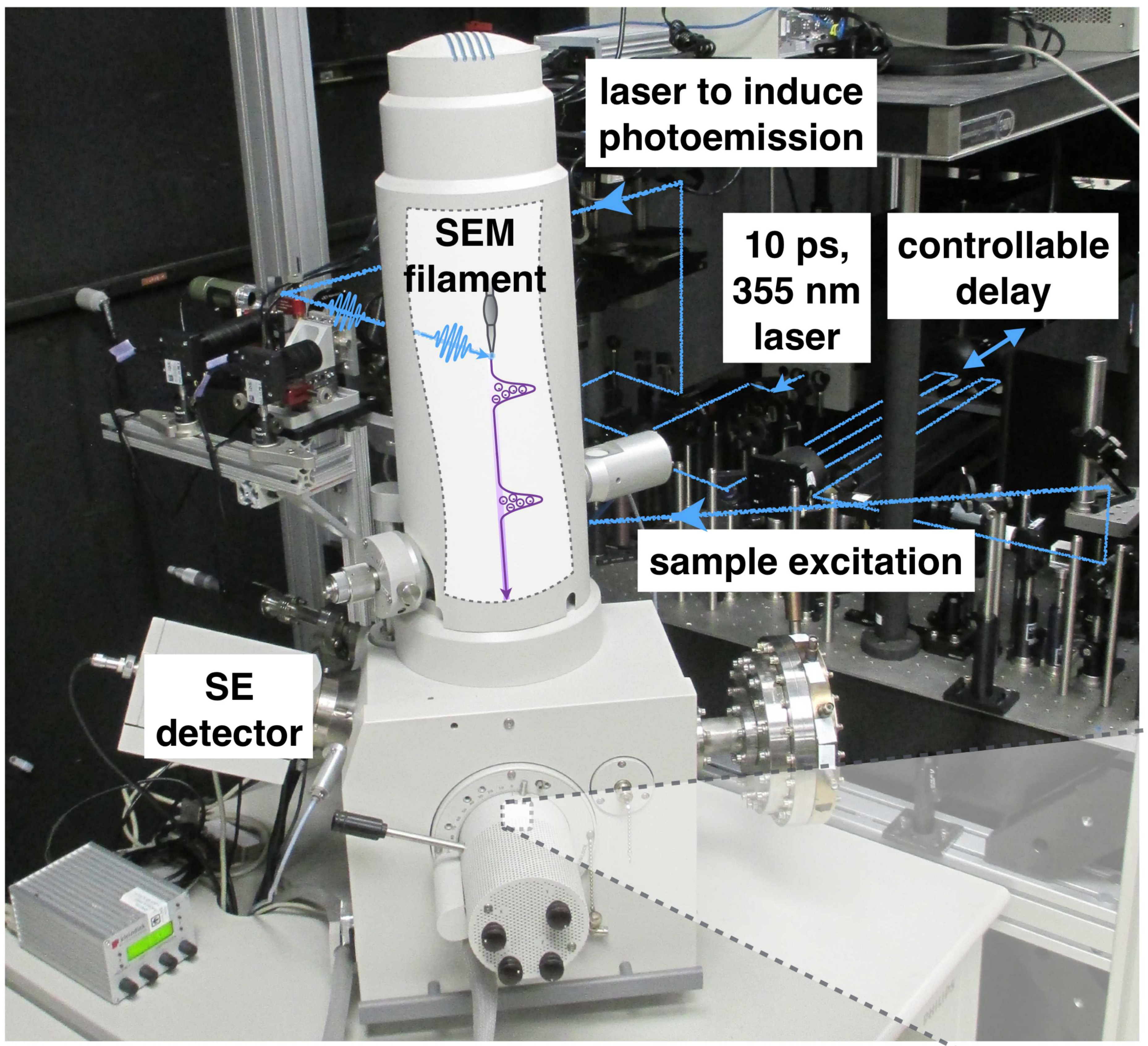
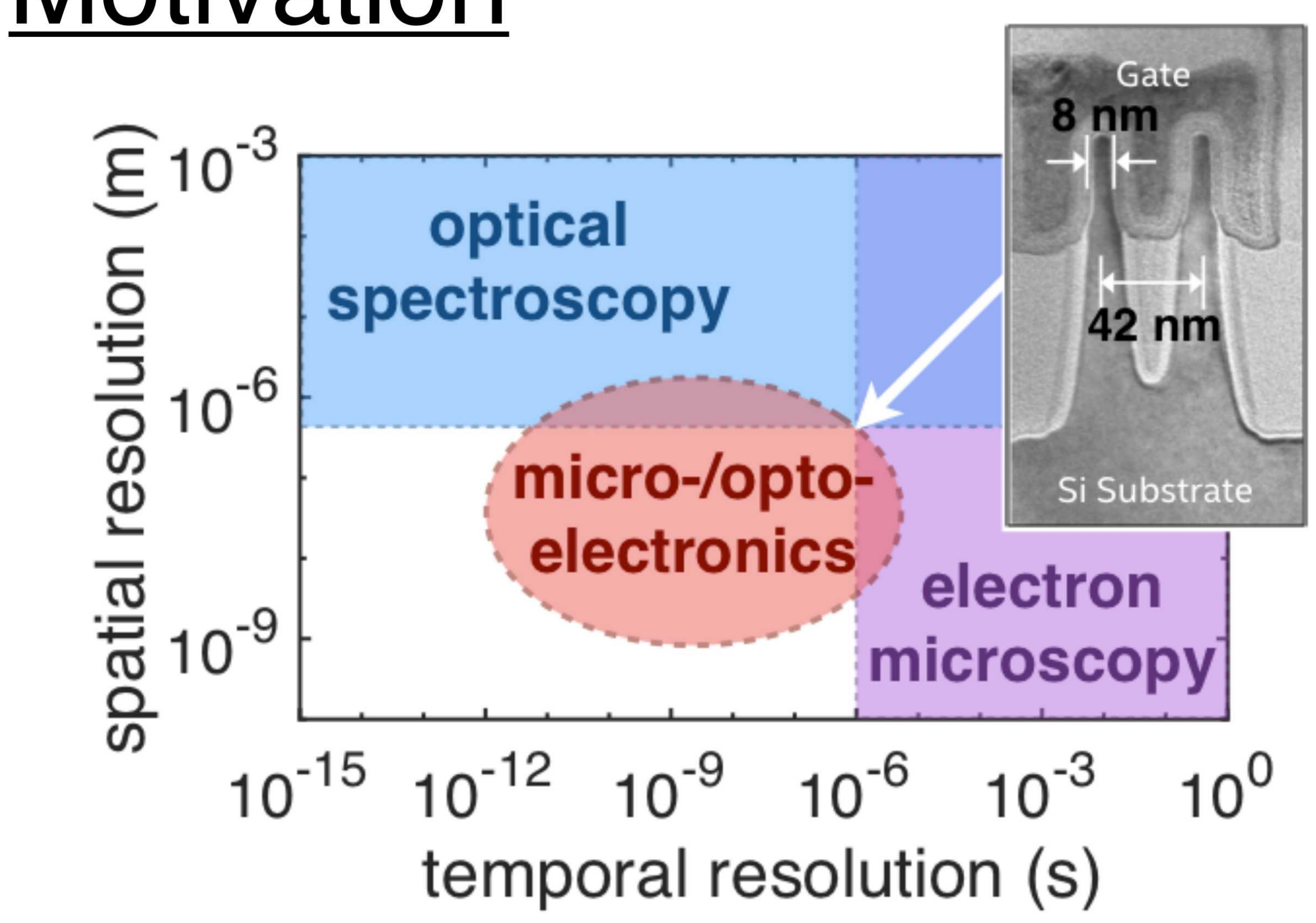
SAND2020-1053D

Scanning Ultrafast Electron Microscopy (SUEM)

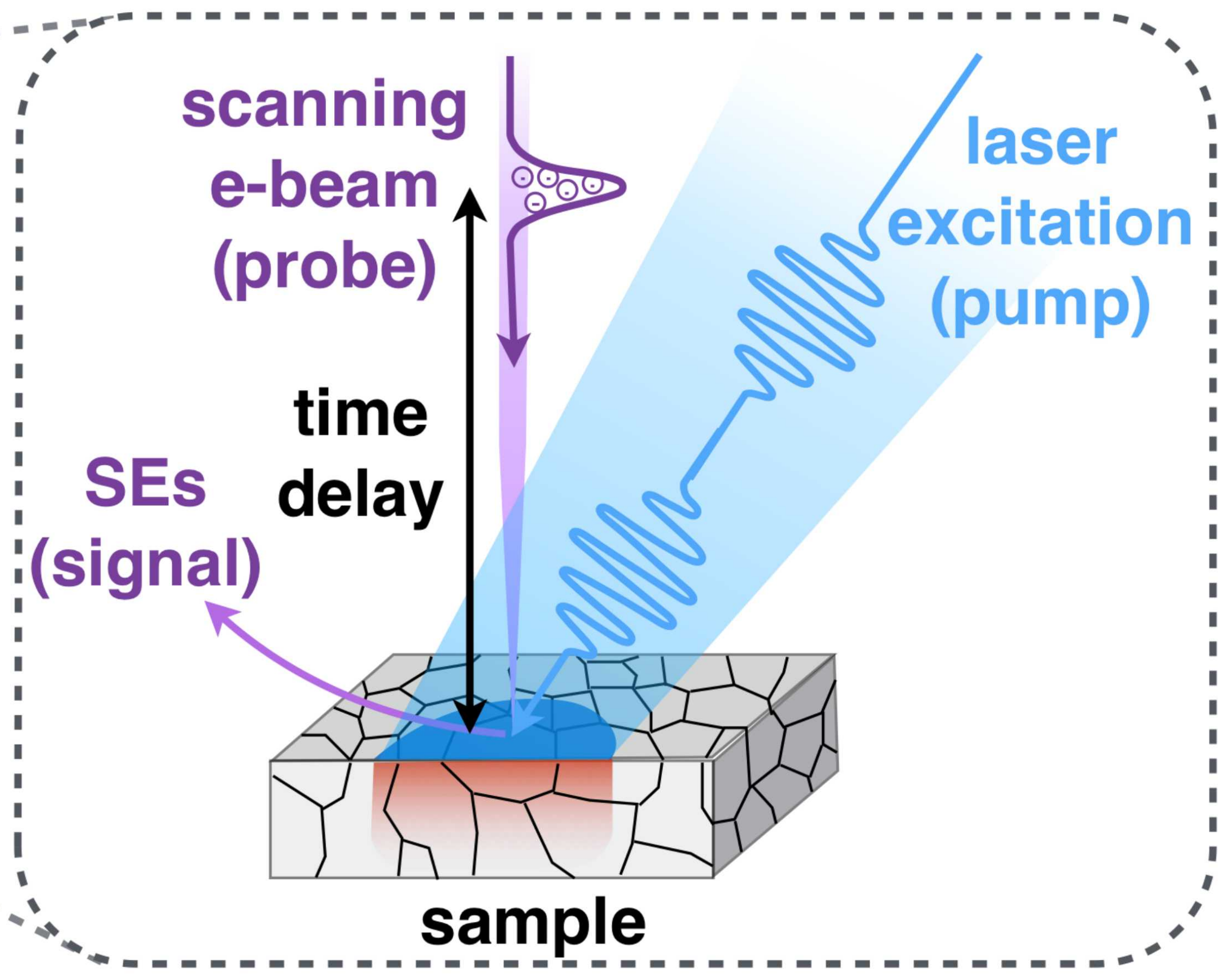


Combines the spatial resolution and sample versatility of an SEM with the temporal resolution of an ultrafast laser to enable observations of charge carrier dynamics in real devices, in-operando, in and around features such as domains, space-charge regions, interfaces, and defects, providing new insights into the operation and optimization of micro- and optoelectronics.

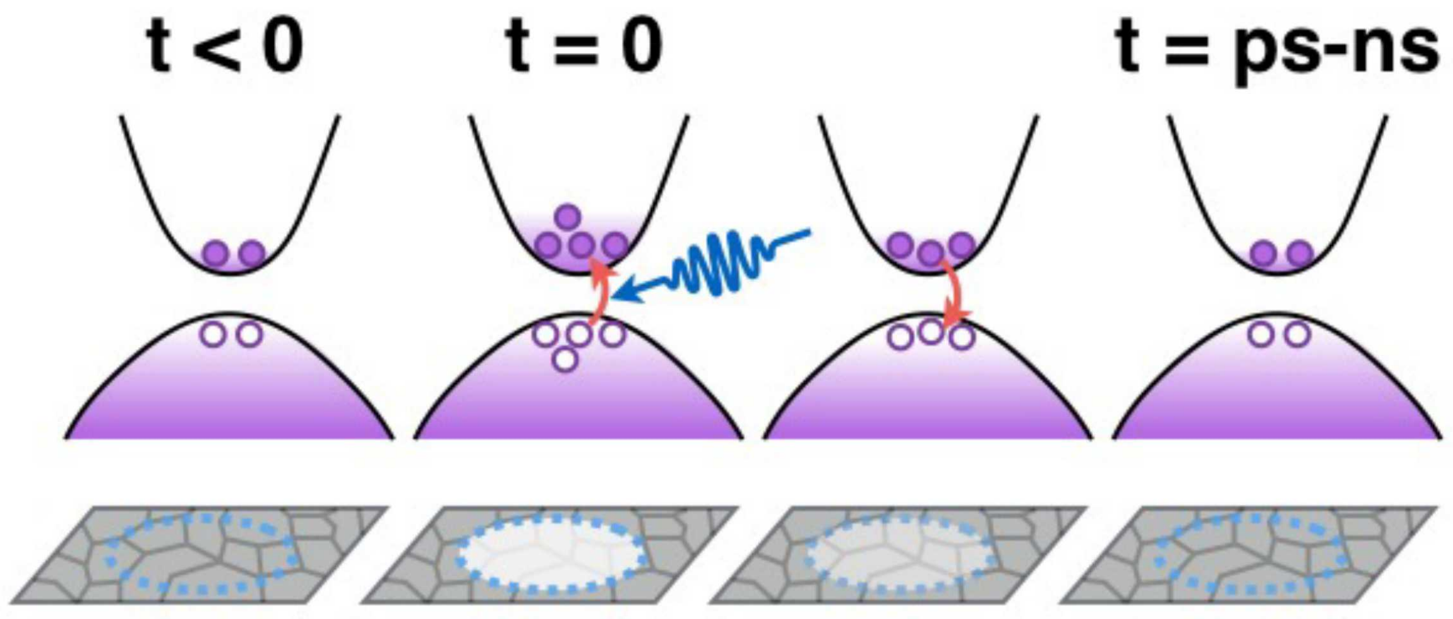
Motivation



Methodology



Ultrafast SEM Movie



With Energy Discriminating Electron Detection

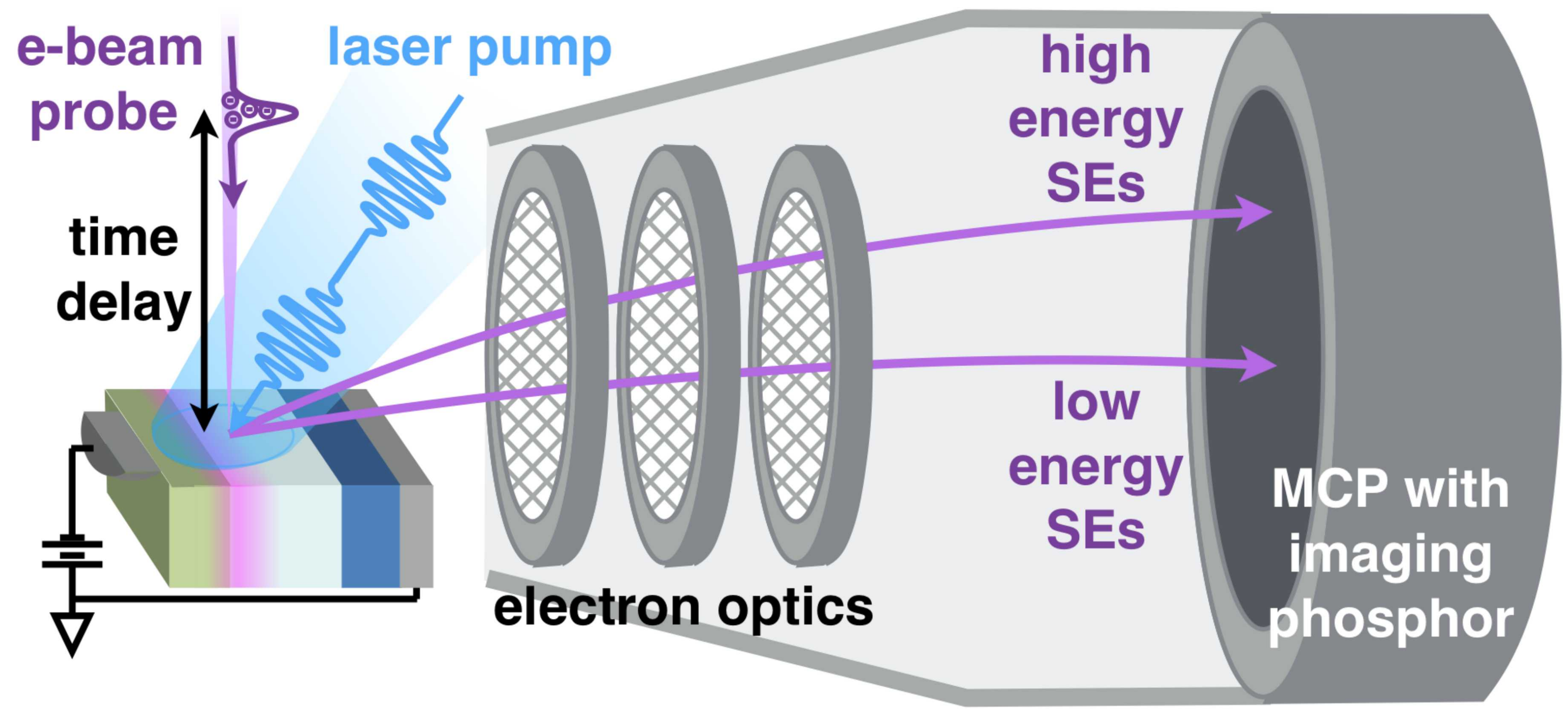


image of electron distribution