

Abstract Submitted  
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**Exciton dynamics in a single layer MoS<sub>2</sub>** JONGHWAN KIM, XI-AOPING HONG, SUFEI SHI, CHENHAO JIN, YINGHUI SUN, FENG WANG, Univ of California - Berkeley — In a low dimensional semiconductor, exciton plays a crucial role in the optical property. Recently, a single layer of MoS<sub>2</sub> has attracted significant attention due to its unique excitonic features. For example, exciton in MoS<sub>2</sub> is predicted to have order of magnitude larger binding energy than conventional direct band gap material. For deeper understanding on such properties, however, it is important to understand how exciton is formed and decays in time domain. Our work on exciton dynamics in MoS<sub>2</sub> by pump probe spectroscopy will be presented with control of both power and wavelength.

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