

Abstract Submitted
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Photoinduced doping in heterostructures of graphene and boron nitride SALMAN KAHN, JAIRO VELASCO JR, LONG JU, EDWIN HWANG, CASEY NOSIGLIA, HSIN ZON TSAI, Department of Physics, University of California, Berkeley, WEI YANG, Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, TAKASHI TANIGUCHI, KENJI WATANABE, Advanced Materials Laboratory, National Institute for Materials Science, DILLON WONG, JUWON LEE, YUANBO ZHANG, Department of Physics, University of California, Berkeley, GUANGYU ZHANG, Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, MICHAEL CROMMIE, ALEX ZETTL, FENG WANG, Department of Physics, University of California, Berkeley — Van der Waals heterostructures (VDH) provide an exciting new platform for materials engineering, where a variety of layered materials with different electrical, optical and mechanical responses can be stacked together to enable new physics and novel functionalities. To create various VDH, we have employed a “stamping transfer” in which two layered materials are exfoliated on separate substrates and then stamped onto each other. Several distinct VDH structures have been realized and characterized through scanned probe and optical measurement schemes. I will discuss recent progress made on these efforts, with an emphasis on optoelectronic measurements of a Graphene/Boron Nitride VDH.

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