

MAR17-2016-030212

Abstract for an Invited Paper
for the MAR17 Meeting of
the American Physical Society

Dabbling in the rich color palette of van der Waals bonded layered materials

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The modest-strength van der Waals bond hits the sweet spot for facilitating the assembly of layered materials. I will discuss some recent experimental and theoretical explorations of van der Waals heterostructures, often with in-plane sp²-bonded components including boron nitride and graphene. The materials can themselves display novel physics and chemistry, or be used as aids for exploring the properties of complementary nanomaterials via electrical transport, optics, high resolution transmission electron microscopy, and scanning tunneling microscopy.