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Probing Graphene on Micropatterned Strain Arrays JOHN HENRY HINNEFELD, NADYA MASON, Univ of Illinois - Urbana — The generation of enormous pseudo-magnetic fields in graphene by the application of carefully designed strain profiles opens a promising window onto an otherwise unattainable high-field regime. A central challenge in exploiting graphene's access to this regime is the difficulty of controllably generating the required strain profiles. Here, we report the tunable fabrication of nano-scale strain feature arrays, as well as optical, mechanical, and other measurements of graphene deposited on substrates prepared by this method. We describe the signatures of strain present in our measurements, and discuss the potential for further experimental exploration of this system.

John Hinnefeld
Univ of Illinois - Urbana

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