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Superconducting junctions in graphene[1]

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Graphene, a single sheet of graphite, is a two-dimensional material which has been long-studied theoretically, but only recently become available to experimentalists. Recent experiments have shown that the electronic properties of graphene are even more remarkable than previously thought. In my talk I will describe the fabrication and characterization of graphene devices, and introduce their basic electronic properties. I will then focus on our recent experiments where we study induced superconductivity in graphene, an observation which elucidates on the quantum coherent properties of electrons in this novel two-dimensional electron gas.

[1]In collaboration with H.B. Heersche, J. Oostinga, L.M.K. Vandersypen and A.F. Morpurgo, at the Kavli Institute of Nanoscience Delft, The netherlands.