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Ngoc T Do* (dothanh@math.tamu.edu) and **Peter Kuchment**. *Quantum graph model of a graphyne and graphyne nanotubes.*

Graphynes, which are non-honeycomb monolayers of carbon allotropes, are expected to be sometimes even better than graphene in terms of electronics properties. Nanotube, although appeared much earlier than graphene, can be viewed as sheets of graphene rolled onto a cylinder. It is thus natural to look at the nanotubes obtained by folding a sheet of a graphyne. In this talk, we will present a study of spectra of Schrödinger operator on a particular graphyne structure and its nanotubes. (Received January 31, 2014)