

Abstract Submitted
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***d + id* superconductivity on the honeycomb bilayer** MILICA MILOVANOVIC, JAKSA VUCICEVIC, DARKO TANASKOVIC, Institute of Physics Belgrade — We demonstrate that for interlayer attractive interactions on bilayer honeycomb lattice with large interlayer hopping, a time reversal symmetry breaking *d*-wave topological superconductor is a dominant phase. We find that small momentum order parameter expansion has $d_{x^2-y^2} + id_{xy}$ symmetry around both Dirac points and discuss a possible relevance of this state for experiments on graphene bilayer.

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