

KIM Youngkuk

Assistant professor
Department of Physics



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Key Words Topological insulators, First-principles calculations, Condensed matter theory

Research Area Condensed matter theory, Computational Physics

Education

- 2013 PhD Seoul National University
- MSc N/A
- 2006 BSc Seoul National University

Experience

- 2017 - current Assistant professor, Physics of Department, SKKU
- 2013 – 2017 Postdoc, Department of Chemistry, University of Pennsylvania
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Position

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Selected Publication

- “Dirac line nodes in inversion-symmetric crystals” Physical review letters 115 (3), 036806 (2015)
- “Double Dirac semimetals in three dimensions” Physical review letters 116 (18), 186402 (2016)
- “Dynamics and stability of divacancy defects in graphene” Physical Review B 84 (7), 075445 (2011)
- “Monolayer Single-Crystal 1T'-MoTe2 Grown by Chemical Vapor Deposition Exhibits Weak Antilocalization Effect”, Nano letters 16 (7), 4297-4304 (2016)
- “Topological domain walls and quantum valley Hall effects in silicene”, Physical Review B 89 (8), 085429 (2014)
- “Strain-induced ferroelectric topological insulator”, Nano letters 16 (3), 1663-1668 (2016)
- “Two-dimensional π -conjugated covalent-organic frameworks as quantum anomalous Hall topological insulators”, Physical review letters 115 (8), 086802 (2016)
- “Influence of the Dimensionality and Organic Cation on Crystal and Electronic Structure of Organometallic Halide Perovskites”, The Journal of Physical Chemistry C 121 (12), 6569-6574 (2017)

Others

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