

Abstract Submitted
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Interactions between oxygen adsorbates on graphene JASON BUB,
DMITRY SOLENOV, St Louis University — Control over the state of the surface
of graphene and its chemical functionality is crucial in many applications including
mobility-reliant electronic applications, as well as chemical sensors. Adsorbates can
dramatically change transport and chemical properties of graphene. We present
results of analytical and numerical investigation of interactions between some of
the most commonly found adsorbates - oxygen atoms. Interactions between these
bivalent adsorbates substantially differ from simpler monovalent adsorbates, such
as fluorine. Our investigation utilizes a synergistic approach combining analytical
green's function analysis and first principle density functional calculations.

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