Amit Vashisht, Akash Kumar Singh, Rohit Narula, Sankalpa Ghosh ; Moved to poster by APS

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Adiabatic Quantum State Transfer in Triple Quantum Dot System in Monolayer Graphene SANKALPA GHOSH, AMIT VASHISHT, AKASH KUMAR SINGH, ROHIT NARULA, Physics Department,Indian Institute of Technology Delhi, New Delhi-110016, India — We describe a scheme for the adiabatic population transfer of electron between two graphene quantum dots (GQDs) spatially separated by a potential barrier between them in a triple-dot system via the dark state. We give a comparison of results between existing semiconductor quantum dot systems for instance GaAs. We plan to extend our analysis to multiple GQDs which should then work as an effective quantum information processing unit.

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