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Quantum Transport through Fullerenes SHAMBHU DAS, PETER WINKLER, University of Nevada, Reno NV 89557 — Quantum transport of electron pathways has recently attracted increased interest in the field of nano-technology. The study of transport through mesoscopic system can explain a wide range of interesting experimental features such as rectification, switching mechanism and transistor actions. The present study is aimed at the possible use of transmission spectra to distinguish between various isomers of certain fullerene molecules. While the famous C_{60} is found as a single isomer, other fullerenes come in different isomeric structures, for example, there are forty distinct isomers known for C_{40} .

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