

Abstract Submitted
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Kondo Physics in Exactly Solvable SU(4) Double Dots ROBERT KONIK, Brookhaven National Laboratory — I study a dot-lead system composed of two quantum dots arranged in series. I consider dots that are both capacitive and tunnel coupled and where the applied gate voltage to the individual dots is unequal. This system admits an exact solution via the Bethe ansatz even in the presence of finite (as opposed to infinite) Coulomb repulsion. From this solution, the transport properties of the dot system can be ascertained analytically. In particular transport can be determined everywhere from the empty orbital to the mixed valence to an SU(4) Kondo regime. While double dots are the focus, natural generalizations to systems with $N > 2$ dots are similarly integrable.

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