

THE CURRENT FORMATION KINETICS
THROUGH ISOLATED ELECTRON
LEVELS OF A MOLECULE

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S u m m a r y

The kinetics of electron transfer through a molecule is studied with regard for the Coulomb interaction between the transferred electrons. It is shown that this interaction becomes responsible for the appearance of different electron-transfer channels each associated with a definite number of electrons captured by the molecule. The formation of the current through a molecule that contains a single active isolated level is analyzed in detail. Based on the derived analytic expressions, the contribution to the total interelectrode current is defined for both elastic (coherent) and inelastic components of the current.