

# Electron transport and plasmonic response of metallic oxides

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Metallic oxides are commonly viewed as examples of electron-correlated systems, where the electron-electron interactions within narrow 3d bands govern electrical and optical properties. However, analysis of some electrical properties suggests some fundamental difficulties with this approximation, may be pointing to different scenarios. Here we shall review properties of SrVO<sub>3</sub> and SrNbO<sub>3</sub> thin films, probably the simplest seemingly correlated systems, and argue that electron-phonon interaction plays a major role. Phonon dressed carriers are heavier and account, among other properties, for the transparency of these oxides in the visible range.