

Mechanism of temperature dependence of RIXS spectra in charge transfer insulators

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We consider a simple model, which reflect basic properties of charge transfer insulator oxides: antiferromagnetic ground state and charge transfer excitations of Zhang-Rice singlet type. The model allows to obtain analytically various response functions [optical conductivity, X-ray absorption spectrum (XAS) and oxygen *K*-edge resonant inelastic X-ray scattering spectrum (RIXS)]. Mechanism of temperature dependence of these functions is elucidated. Recent experimental and numerical studies[1, 2] of edge-shared cuprates are discussed.

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