

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Phase diagram of the one dimensional extended Falicov-Kimball model PHILIP BRYDON, MIKLOS GULACSI, Australian National University, Canberra, Australia, ALAN BISHOP, Los Alamos National Laboratory, Los Alamos, USA — We solve the one dimensional spinless Falicov-Kimball model with hybridization between the conduction and localized electrons for partial band filling. Using a bosonization technique we derive an effective model for the occupation of the localized orbitals and find a crossover from a mixed-valence metallic state to a charge-ordered insulating state with increasing on-site Coulomb interaction.

Miklos Gulacsi
Australian National University

Date submitted: 04 Dec 2004

Electronic form version 1.4