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Combined Effect of Bond- and Potential-Disorder in Half-Doped Manganites SANJEEV KUMAR, University of Twente and Leiden University, ARNO KAMPF, University of Augsburg — We analyze the effects of both bond- and potential-disorder in the vicinity of a first-order metal insulator transition in a two-band model for manganites using a real-space Monte Carlo method. Our results reveal a novel charge-ordered state coexisting with spin-glass behavior. We provide the basis for understanding the phase diagrams of half-doped manganites, and contrast the effects of bond- and potential-disorder and the combination of both.

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