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Effect of Bond-Diluted on Spin-3/2 Transverse Ising Model with Crystal Field JIANG Wei,<sup>1,2</sup> LU Zhan-Hong,<sup>1</sup> WEI Guo-Zhu,<sup>2</sup> and DU An<sup>2</sup>

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Abstract: The magnetic properties of the bond-diluted spin-3/2 transverse Ising model with the presence of a crystal field on the honeycomb lattice are studied within the framework of the effective field theory with correlations. The interactions  $J_{ij}$  are assumed to be independent random variables with distribution  $P(J_{ij})=p\delta(J_{ij}-J)+(1-p)\delta(J_{ij})$ .

PACS: 75.10.Dg, 75.10.Hk, 75.40.Mg Key words: Ising model, bond-diluted, phase diagram, honeycomb lattice

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