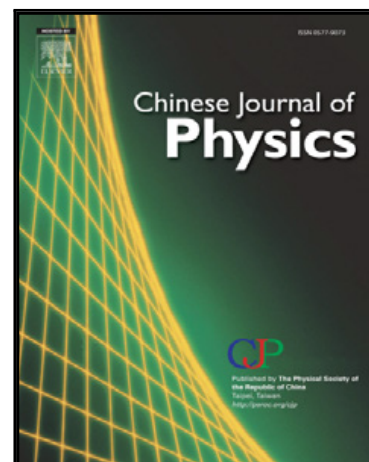


Accepted Manuscript

The Bimodal Random Crystal Field and Biquadratic Exchange Interaction Effects for the Spin-3/2 Ising Model on the Bethe Lattice

M. Karimou, E. Albayrak, A. Tessilimy, F. Hontinfinde, R. Yessoufou

PII: S0577-9073(17)31040-7
DOI: [10.1016/j.cjph.2017.10.005](https://doi.org/10.1016/j.cjph.2017.10.005)
Reference: CJPH 363



To appear in: *Chinese Journal of Physics*

Received date: 17 August 2017
Revised date: 20 October 2017
Accepted date: 20 October 2017

Please cite this article as: M. Karimou, E. Albayrak, A. Tessilimy, F. Hontinfinde, R. Yessoufou, The Bimodal Random Crystal Field and Biquadratic Exchange Interaction Effects for the Spin-3/2 Ising Model on the Bethe Lattice, *Chinese Journal of Physics* (2017), doi: [10.1016/j.cjph.2017.10.005](https://doi.org/10.1016/j.cjph.2017.10.005)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- The phase transition properties of the BEG model for spin $3/2$ on the BL is considered.
- Both effects of random crystal field and biquadratic exchange interactions are examined.
- D (K) is either turned on with probability $1p$ (q) or turned off with probability p ($1q$).
- Phase diagrams are obtained on the $(K/J, kT/J)$ and $(D/J, kT/J)$ planes on honeycomb lattice.
- The model presents second and first order phase transitions, and also the tricritical points.

Download English Version:

<https://daneshyari.com/en/article/8145144>

Download Persian Version:

<https://daneshyari.com/article/8145144>

[Daneshyari.com](https://daneshyari.com)