

Accepted Manuscript

Monte Carlo simulation of magnetic properties of mixed spin (3/2, 1) ferromagnetic and ferrimagnetic disordered binary alloys with amorphous structure

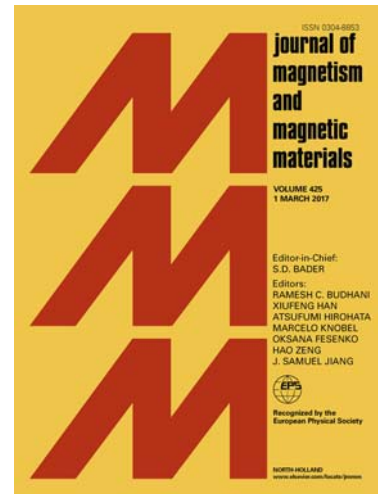
H. Nakhaei Motlagh, G. Rezaei

PII: S0304-8853(16)33119-5

DOI: <http://dx.doi.org/10.1016/j.jmmm.2017.08.075>

Reference: MAGMA 63109

To appear in: *Journal of Magnetism and Magnetic Materials*



Please cite this article as: H.N. Motlagh, G. Rezaei, Monte Carlo simulation of magnetic properties of mixed spin (3/2, 1) ferromagnetic and ferrimagnetic disordered binary alloys with amorphous structure, *Journal of Magnetism and Magnetic Materials* (2017), doi: <http://dx.doi.org/10.1016/j.jmmm.2017.08.075>

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.

Monte Carlo simulation of magnetic properties of mixed spin (3/2, 1) ferromagnetic and ferrimagnetic disordered binary alloys with amorphous structure

H. Nakhaei Motlagh, G. Rezaei^{1 2}

Department of Physics, College of Sciences, Yasouj University, Yasouj, 75914-353, Iran.

Abstract

Monte Carlo simulation is used to study the magnetic properties of mixed spin (3/2, 1) disordered binary alloys on simple cubic, hexagonal and amorphous magnetic ultra-thin films with $18 \times 18 \times 2$ atoms. To this end, at the first approximation, the exchange coupling interaction between the spins is considered as a constant value and at the second one, the Ruderman-Kittel-Kasuya-Yosida (RKKY) model is used. Effects of concentration, structure, exchange interaction, single ion-anisotropy and the film size on the magnetic properties of disordered ferromagnetic and ferrimagnetic binary alloys are investigated. Our results indicate that the spontaneous magnetization and critical temperatures of rare earth-3d transition binary alloys are affected by these parameters. It is also found that in the ferrimagnetic state, the com-

¹Corresponding author. Phone: +98 74 3100 4168.

²E-Mail: grezaei@yu.ac.ir.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات