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خوشایم. اطلاع برسانم که مقاله اعمالات ارسالی شما علی بنام خانم دین کترش شیمی معدنی ایران با مشخصات زیر:

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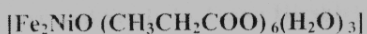
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Synthesis and X-ray study of a new oxo-bridged heterotrinnuclear compound



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Oxo-centered triangular complexes of the general type  $[\text{M}_3\text{O}(\text{OOCR})_6\text{L}_3]^{m-}$  are particularly valuable as frameworks for systematically studying metal-metal interactions in clusters. They have been characterized with a wide variety of first-row and heavier transition metals, with mixed-metal combinations and with mixed-valency combinations [1]. The geometry of the central cluster remains relatively constant throughout the series and is often very close to 3-fold symmetry with a planar  $\text{OM}_3$  unit, so that quite small deviations can be highly significant. Among the issues of interest are antiferromagnetic coupling in mixed-metal clusters, [1,2] electron delocalization in mixed-valence clusters [3,4<sup>a</sup>] and symmetry lowering, of electronic origin, in homonuclear paramagnetic clusters. A problem with the acetate series however is that most of them crystallize with extra solvent molecules which profoundly influence the physical properties [3,4<sup>b</sup>].

The mixed-ligand complexes of transition metals are also important due to their novel structural features, unusual magnetic properties, and catalytic activities. In many studies, unsaturated carboxylic acid, acrylic acid has been used as bridging groups in trinuclear oxo-centered complexes [5].

In this study a new oxo-centred heterotrinnuclear complex  $[\text{Fe}_2\text{NiO}(\text{CH}_3\text{CH}_2\text{COO})_6(\text{H}_2\text{O})_3]$  was synthesized and characterized by X-ray crystallography, IR Spectroscopy and elemental analysis.

Crystal data are reported for this complex and are as follows:

system monoclinic, space group P-1,  $a = 13.2516(4) \text{ \AA}$ ,  $b = 14.2676(5) \text{ \AA}$ ,  $c = 16.2900(5) \text{ \AA}$ ,  $\alpha = 86.304(2)^\circ$ ,  $\beta = 89.684(2)^\circ$ ,  $\gamma = 66.570(2)^\circ$ ,  $V = 2819.42(16) \text{ \AA}^3$ ,  $Z = 4$ ,  $R_1 = 0.04$ ,  $R_w = 0.11$ .

The IR spectra of this compound shows intensive absorption bands at 1560 and 1430  $\text{cm}^{-1}$ , which are assigned to  $\nu_{\text{as}}(\text{COO})$  and  $\nu_{\text{s}}(\text{COO})$  vibration, respectively.

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