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Syntheses, Structures and Biological Evaluation of some Transition Metal Complexes with a Tetradentate Benzamidine/Thiosemicarbazone Ligand

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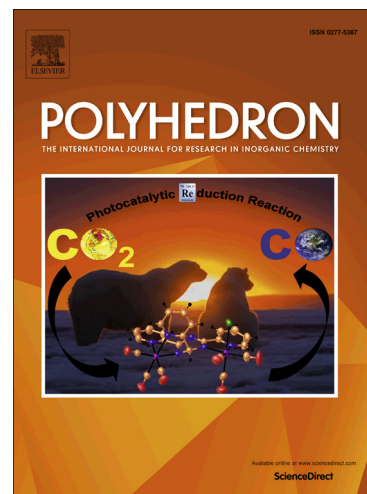
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2
3 **with a Tetradentate Benzamidine/Thiosemicarbazone Ligand**

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22 **Abstract.** The potentially tetradentate benzamidine/thiosemicarbazone ligand, Et₂N-(C=S)-
23 NH-C(Ph)=N-(*o*-C₄H₆)-C(Me)=N-NH-(C=S)-NH-Me (**H₂L**) readily reacts with
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25 Ni(CH₃COO)₂, [PdCl₂(CH₃CN)₂], [PtCl₂(PPh₃)₂] and (NBu₄)[ReOCl₄] under formation of
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27 complexes of the compositions [M(L)] (M= Ni (**1**), Pd (**2**), Pt (**3**)) and [ReO(L)(OMe)] (**4**).
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29 In all complexes, H₂L is doubly deprotonated and bonded to the central metal ion via its
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31 N₂S₂ donor set. Complexes **1**, **2** and **3** have distorted square-planar coordination spheres,
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33 while the rhenium compound **4** is an octahedral *trans* oxido/methoxido complex. The H₂L
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35 proligand shows a medium cytotoxicity with an IC₅₀ value of 21.1 μM. While the rhenium
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37 complex **4** exhibits a stronger antiproliferative effect (IC₅₀ = 5.52 μM), the nickel,
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39 palladium and platinum complexes are almost inactive.
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50 **Keywords:** Transition Metals, Benzamidines, Thiosemicarbazones, X-ray structure,
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52 Cytotoxicity
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