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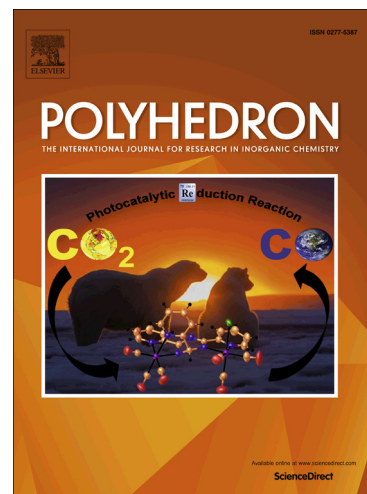
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**Synthesis and Characterization of Two Polydentate Pyridylamines,
Their Acidified Salts and Late First-Row Transition Metal Complexes**

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Keywords: Pyridylamine, protonated amine, pyridinium ion, hydrogen bonds, metallation.

Abstract: Synthesis and characterization of a new tripodal polydentate pyridylamine ^C**L** and an improved synthesis of analogue ^N**L** were developed. Acidified salts of the two polyamines (^C**LH** and ^N**LH**), one trizinc (**1**), and two monometallic complexes (**2** and **3**) were synthesized and structurally characterized. Protonation of the polyamines occurred at the pyridine N atoms, strongly supported by the hydrogen bonds between the cations and anions in the extended network. Structural analysis of the three complexes supported by ^N**L** demonstrated its versatile coordination modes.

Graphic abstract:

Convenient synthesis of two tripodal polydentate pyridylamines was accomplished. Structural analysis of their acidified salts determined that protonation of the polyamines occurred at the pyridine N atoms. Versatile coordination modes of one pyridylamine with late first-row transition metal atoms were also revealed.

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