

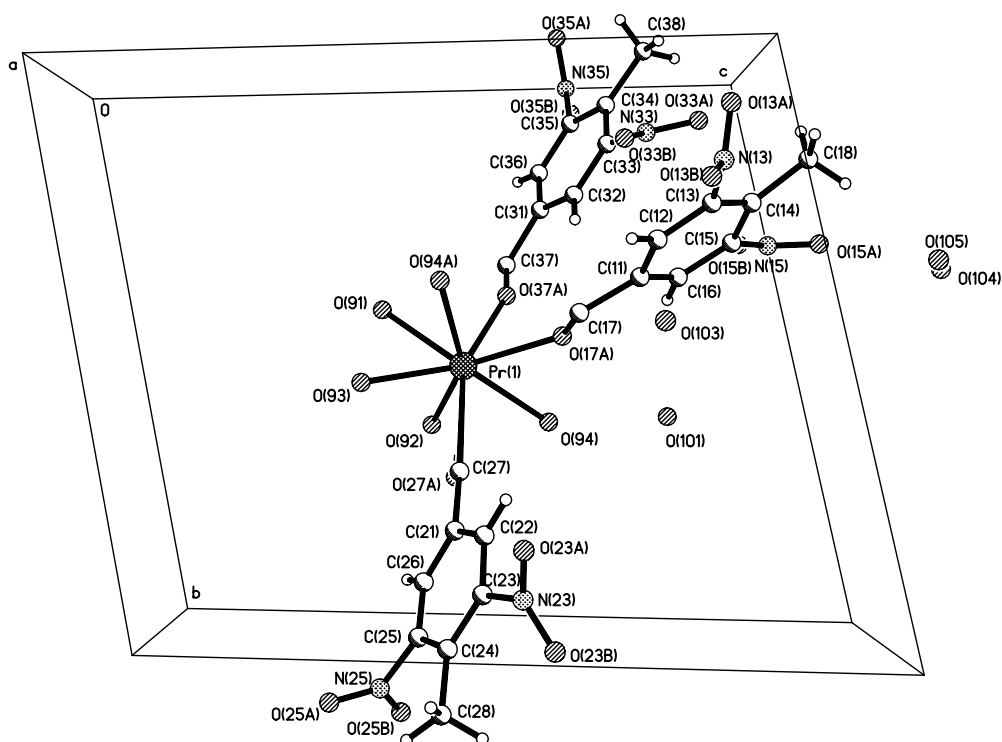
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Hydrogen Bond Mediated Open-frame Networks in Coordination Polymers: Supramolecular Assemblies of Pr(III) and 3,5-Dinitro-4-methylbenzoic Acid with Aza-donor Compounds

Sunil Varughese & V. R. Pedireddi*

Division of Organic Chemistry, National Chemical Laboratory, Dr. Homi Bhabha
Road, Pune 411 008, India.
pedireddi@ems.ncl.res.ins

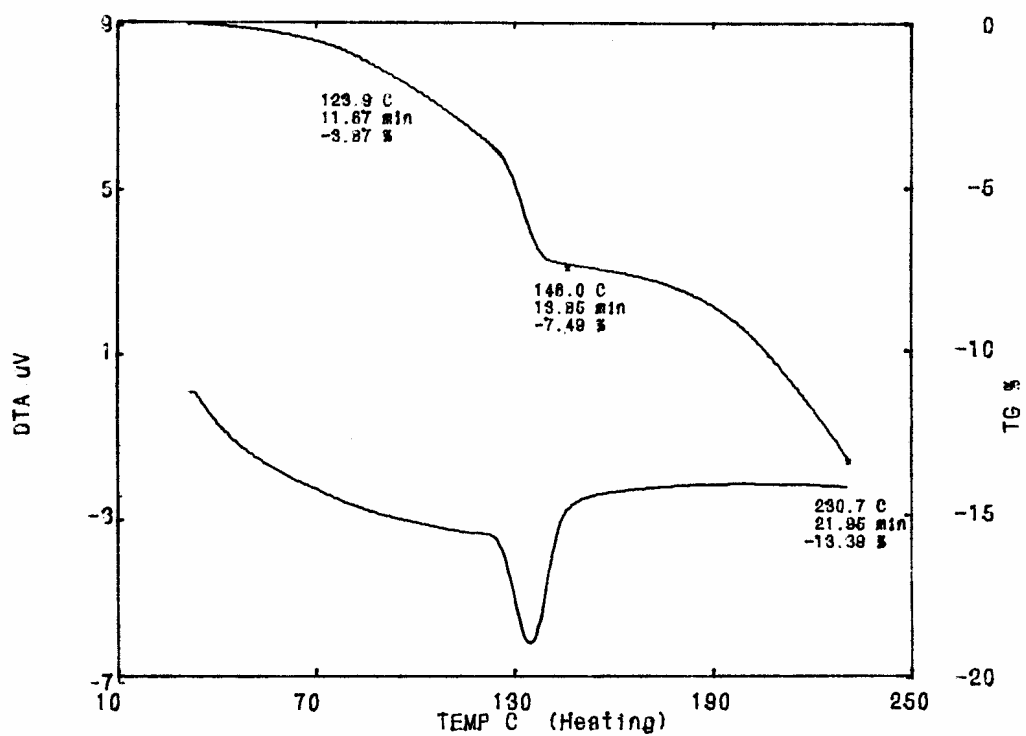
ORTEP of 1



Experimental procedure of 1.

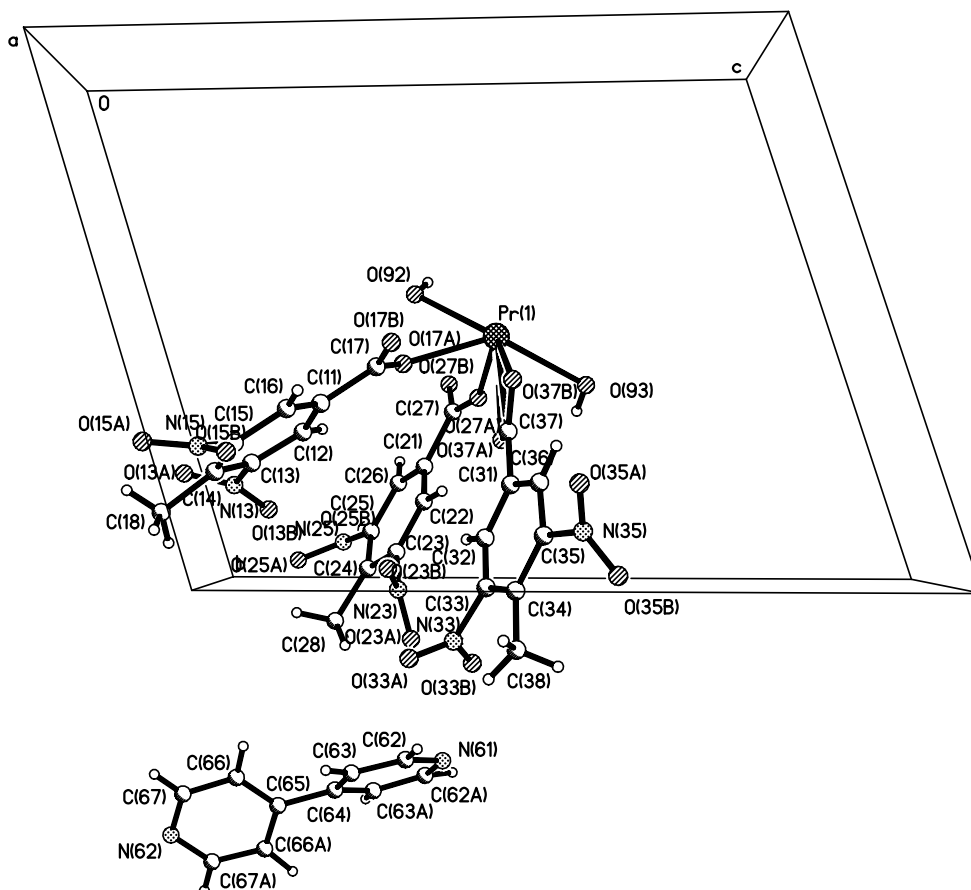
To an aqueous solution (15mL) of praseodymium acetate hydrate (0.159g, 0.5 mmol), was added 3,5-dinitro-4-methyl benzoic acid (0.113g, 0.5 mmol), with stirring. After stirring for 5 minutes, the mixture was transferred and sealed in a Teflon-lined stainless-steel autoclave of 23 mL capacity, under autogenous pressure and heated to 160°C for 24 h. The pale yellow needles obtained was washed with distilled water and dried at room temperature. (Yield: 64%).

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TG – DTA graph for complex 1

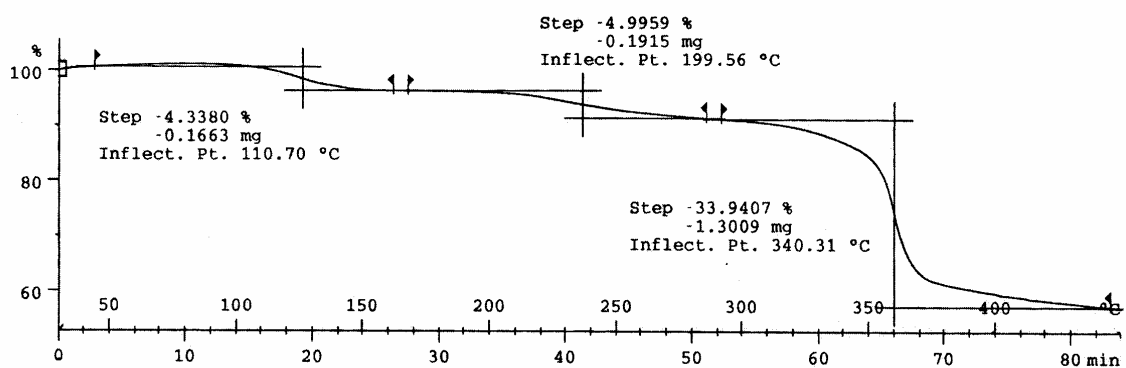
ORTEP of 2



Experimental procedure of 2

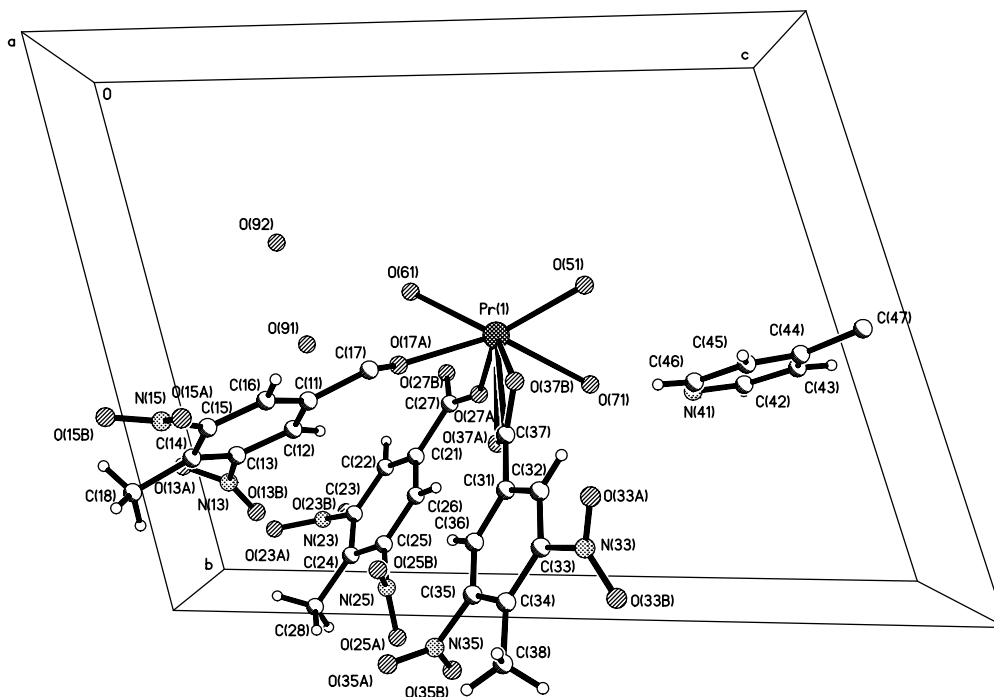
To an aqueous solution (15mL) of praseodymium acetate hydrate (0.159g, 0.5 mmol), was added 3,5-dinitro-4-methyl benzoic acid (0.113g, 0.5 mmol), with stirring, followed by 4,4'-bipyridine (0.078g, 0.5 mmol). After stirring for 5 minutes, the mixture was transferred and sealed in a Teflon-lined stainless-steel autoclave of 23 mL capacity, under autogenous pressure and heated to 160°C for 24 h. The pale yellow needles obtained was washed with distilled water and dried at room temperature. (Yield: 57%)
Elemental analysis: Calculated: C 40.4, H 2.68, N 11.11 Obtained: C 40.39, H 3.26, N 11.01

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TG graph for complex 2

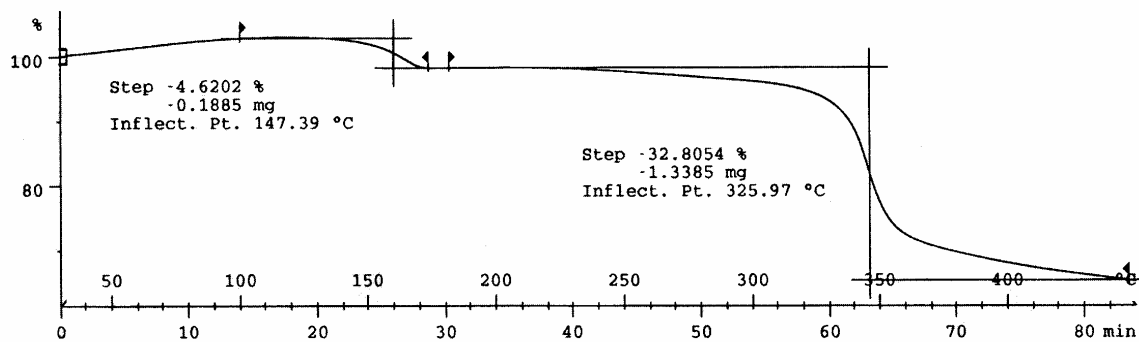
ORTEP of 3



Experimental procedure for complex 3

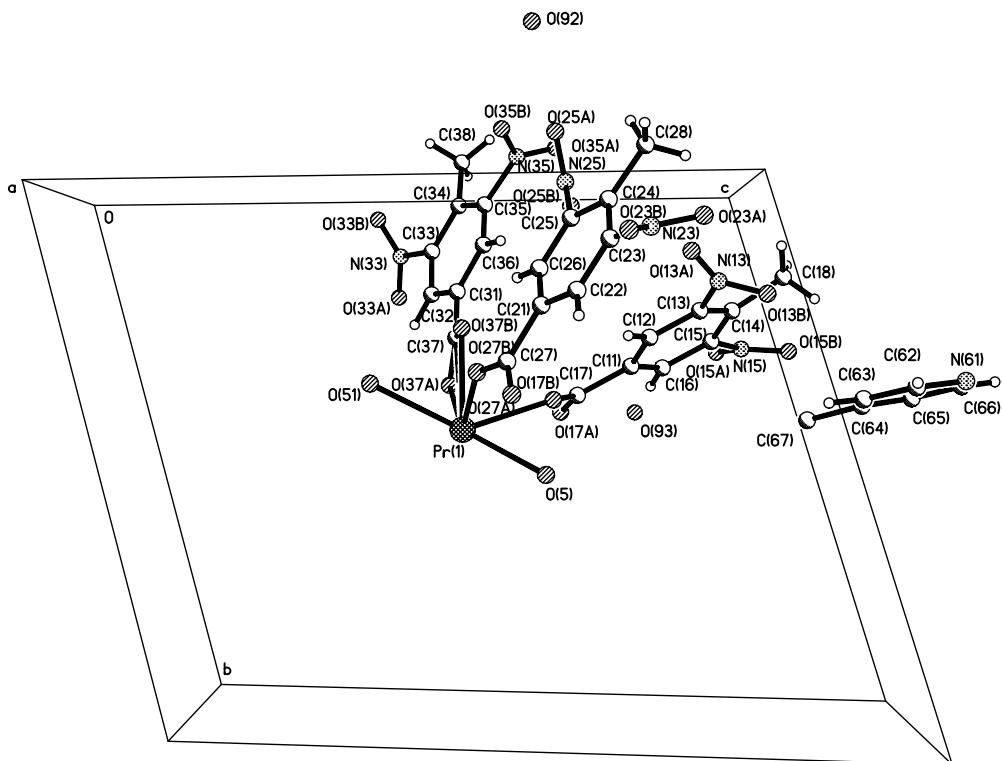
To an aqueous solution (15mL) of praseodymium acetate hydrate (0.159g, 0.5 mmol), was added 3,5-dinitro-4-methyl benzoic acid (0.113g, 0.5 mmol), with stirring. After stirring for 5 minutes, the mixture was transferred and sealed in a Teflon-lined stainless-steel autoclave of 23 mL capacity, under autogenous pressure and was heated to 160°C for 24 h. To the yielded product *trans*-1,2-bis (4-pyridyl)ethylene (0.911g, 0.5mmol) was added and again subjected to the autogenous pressure and heated to 160°C for 24h. The pale yellow needles obtained was washed with distilled water and dried at room temperature. (Yield: 43%) Elemental analysis: Calculated: C 36.77, H 2.86, N 10.01 Obtained: C 37.80, H 2.64, N 10.03

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TG graph for complex **3**

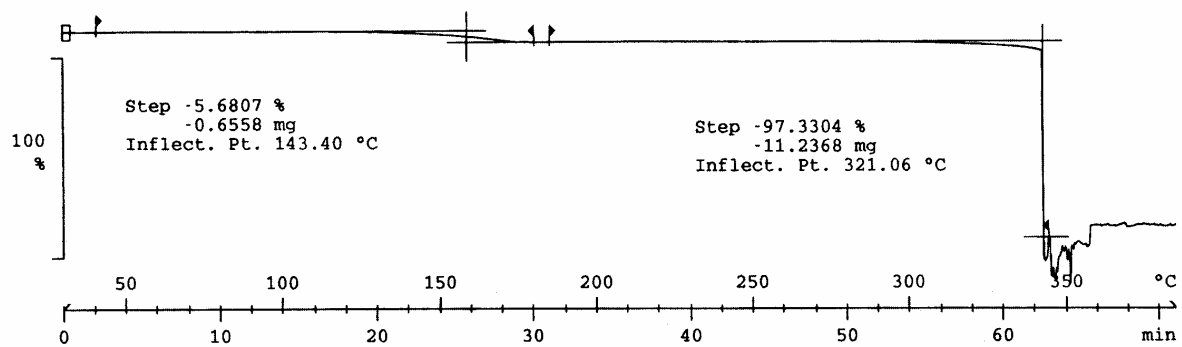
ORTEP of 4



Experimental procedure for 4

To an aqueous solution (15mL) of praseodymium acetate hydrate (0.159g, 0.5 mmol), was added 3,5-dinitro-4-methylbenzoic acid (0.113g, 0.5 mmol), with stirring, followed by 1,2-bis(4-pyridyl)ethane (0.092g, 0.5 mmol). After stirring for 5 minutes, the mixture was transferred and sealed in a Teflon-lined stainless-steel autoclave of 23 mL capacity, under autogenous pressure and heated to 160°C for 24 h. The pale yellow needles obtained was washed with distilled water and dried at room temperature. (Yield: 54%) Elemental analysis: Calculated: C 36.07, H 3.11, N 9.82 Obtained: C 34.75, H 2.32, N 9.36

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TG graph of complex 4