

Contents

1	Introduction	1
1.1	Lacunary Polyoxometalates (LPOMs)	4
1.2	Transition Metal Substituted Polyoxometalates (TMSPOMs)	6
	References	10
2	Oxidation of Alcohols Catalyzed by Supported Undecamolybdophosphate	15
2.1	Undecamolybdophosphate Supported on to Metal Oxides (ZrO ₂ , Al ₂ O ₃)	15
2.1.1	Experimental	15
2.1.2	Result and Discussion	18
2.2	Undecamolybdophosphate Anchored to Porous Supports (Zeolite H β , MCM-41)	30
2.2.1	Experimental	30
2.2.2	Result and Discussion	31
	References	40
3	Oxidation of Alcohols Catalyzed by Transition Metal Substituted Phosphomolybdates	43
3.1	Experimental	43
3.1.1	Synthesis of Transition Metal Substituted Phosphomolybdates (PMo ₁₁ M; M = Co, Mn, Ni, Cu)	44

3.2	Result and Discussion	44
3.2.1	Characterization of Transition Metal (Mn, Co, Ni, Cu)—Substituted Phosphomolybdates	44
3.2.2	Catalytic Activity	47
	References	53
4	Conclusive Remarks	55

Polyoxomolybdates as Green Catalysts for Aerobic
Oxidation

Patel, A.; Pathan, S.

2015, XI, 55 p. 35 illus., 23 illus. in color., Softcover

ISBN: 978-3-319-12987-7