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Supplementary Information

Heterolytic alkene oxidation with H₂O₂ catalyzed by Nb-substituted Lindqvist

tungstate immobilized on carbon nanotubes

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Catalyst/Support	Ν	POM	S _{BET}	V _{pore}
	(at%)	(wt%)	(m^{2}/g)	(cm^{3}/g)
CNTs	0	-	150	0.70
N-CNTs	0.9	-	161	0.64
N-CNTs	4.8	-	157	0.53
HNb(O ₂)W ₅ /CNTs	0	15	118	0.33
HNb(O ₂)W ₅ /N-CNTs	0.9	15	124	0.39

Table S1. Elemental analysis and textural data for CNTs and N-CNTs supports and representative supported HNb(O₂)W₅ catalysts



Fig. S1. FT-IR spectra of $(Bu_4N)_3[Nb(O)W_5O_{18}]$ $(Nb(O)W_5)$, $(Bu_4N)_2[(CH_3O)NbW_5O_{18}]$ $(Nb(OCH_3)W_5)$, $(Bu_4N)_4[(NbW_5O_{18})_2O]$ $((NbW_5)_2O)$, and $(Bu_4N)_2[HNb(O_2)W_5O_{18}]$ $(HNb(O)_2W_5)$.



Fig. S2. Effect of HClO₄ on adsorption of HNb(O₂)W₅ on N-CNTs (MeCN, 25 °C).



Fig. S3. HAADF-STEM images of 15 wt% HNb(O₂)W₅/CNTs.



Fig. S4. EDX spectrum of 15 wt% HNb(O₂)W₅/CNTs.