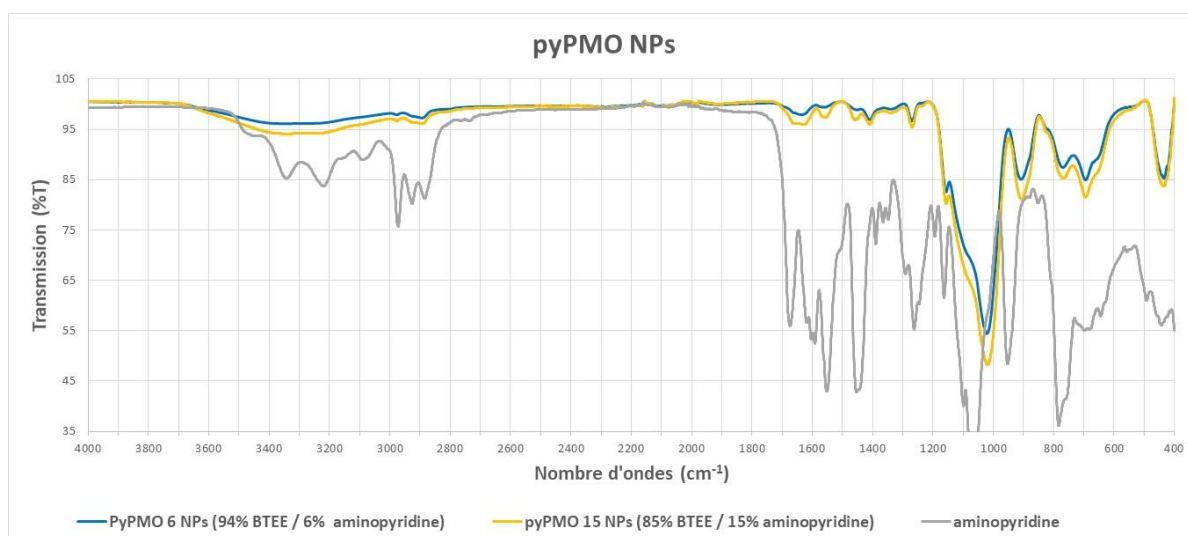


# ESI: Periodic mesoporous organosilica nanoparticles for CO<sub>2</sub> adsorption at standard temperature and pressure

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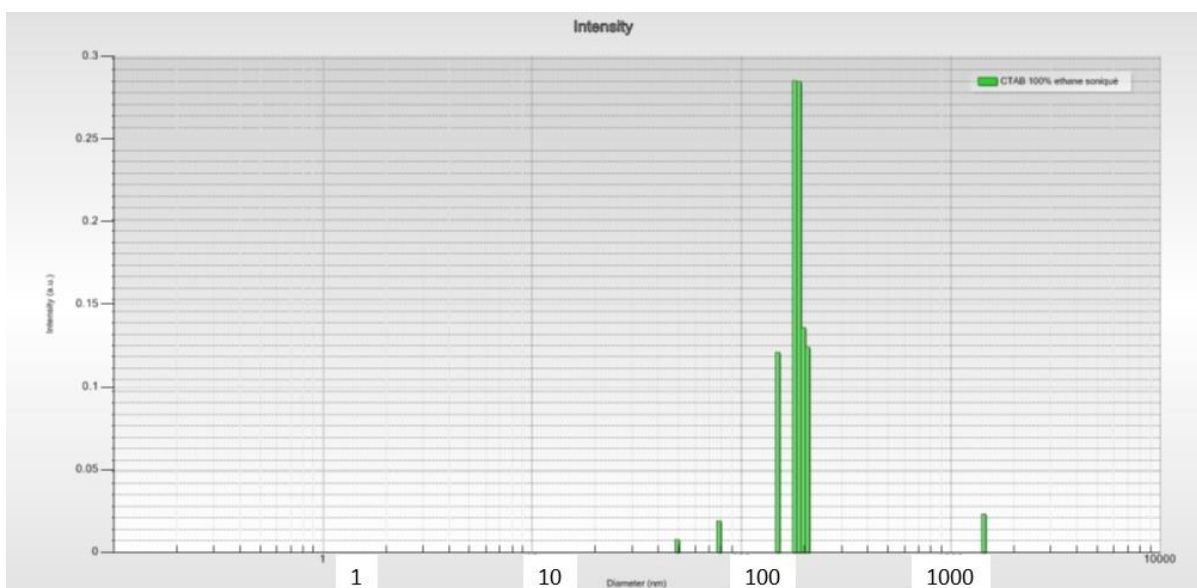
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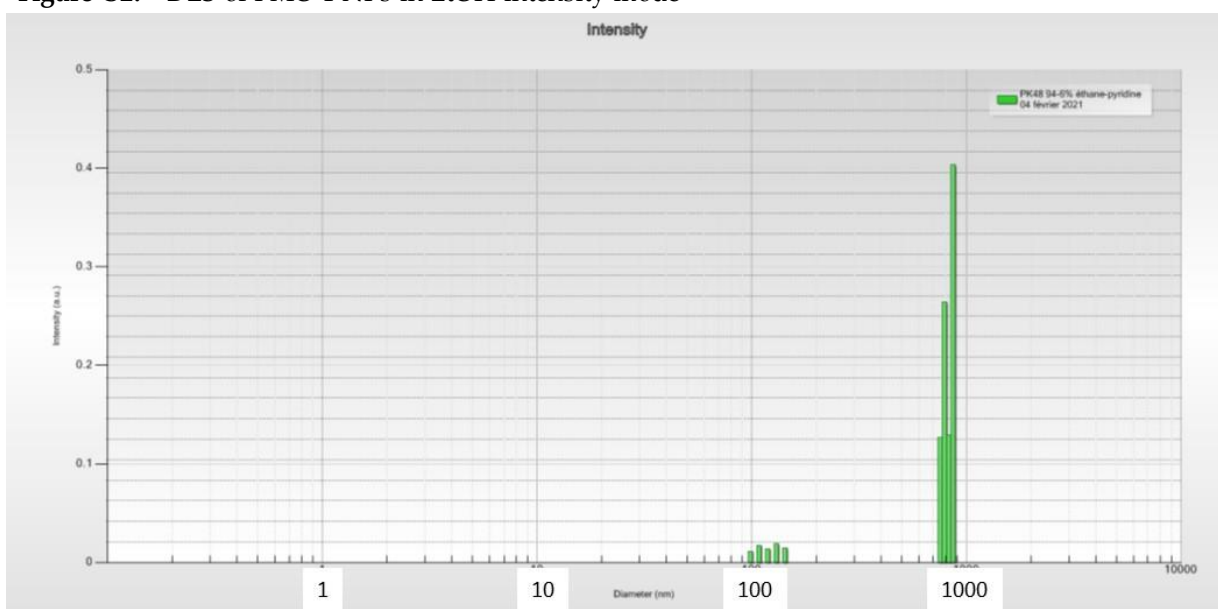
**Figure S1.** FTIR-ATR of pyPMO NPs

**Table S1,** Microanalyses of PMO1NPs and pyPMO NPs

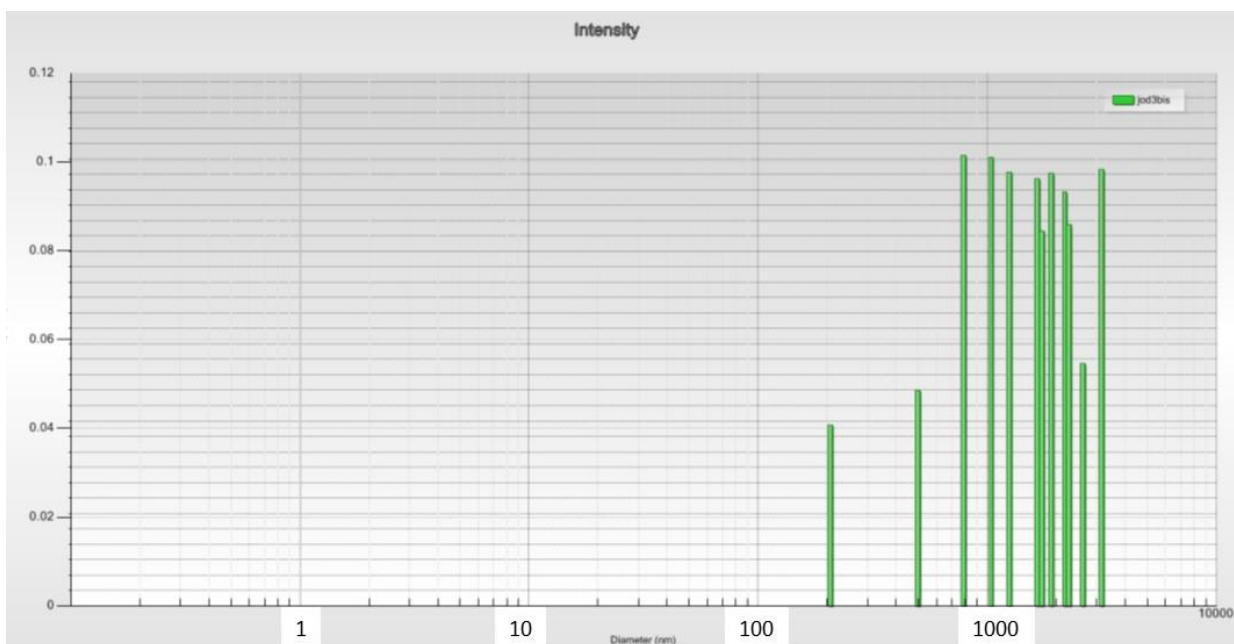
PMO NPs	% C	% H	% N	% O	% Si
PMO 1 NPs (100% ethane)	18.298	4.358	0.156	6.099	71.089
pyPMO 6 NPs (94% ethane / 6% pyridine)	18.290	4.411	1.446	6.583	69.27
pyPMO 15 NPs (85% ethane / 15% pyridine)	19.386	4.279	2.880	5.987	67.468



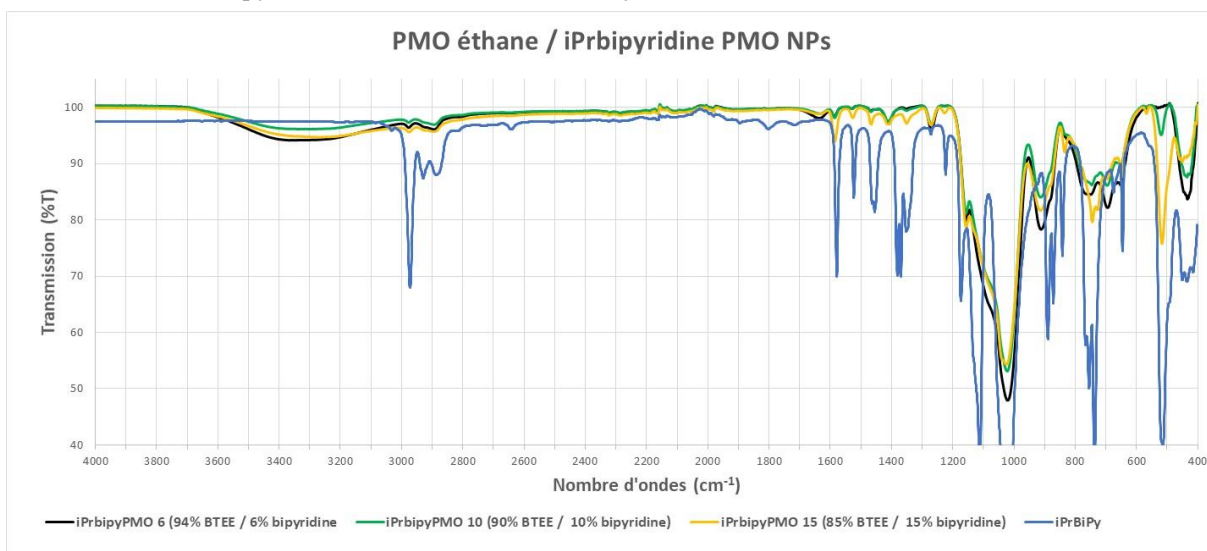
**\*Figure S2.** DLS of PMO 1 NPs in EtOH intensity mode



**Figure S3.** DLS of pyPMO 6 NPs in EtOH intensity mode



**Figure S4.** DLS of pyPMO 15 NPs in EtOH intensity mode

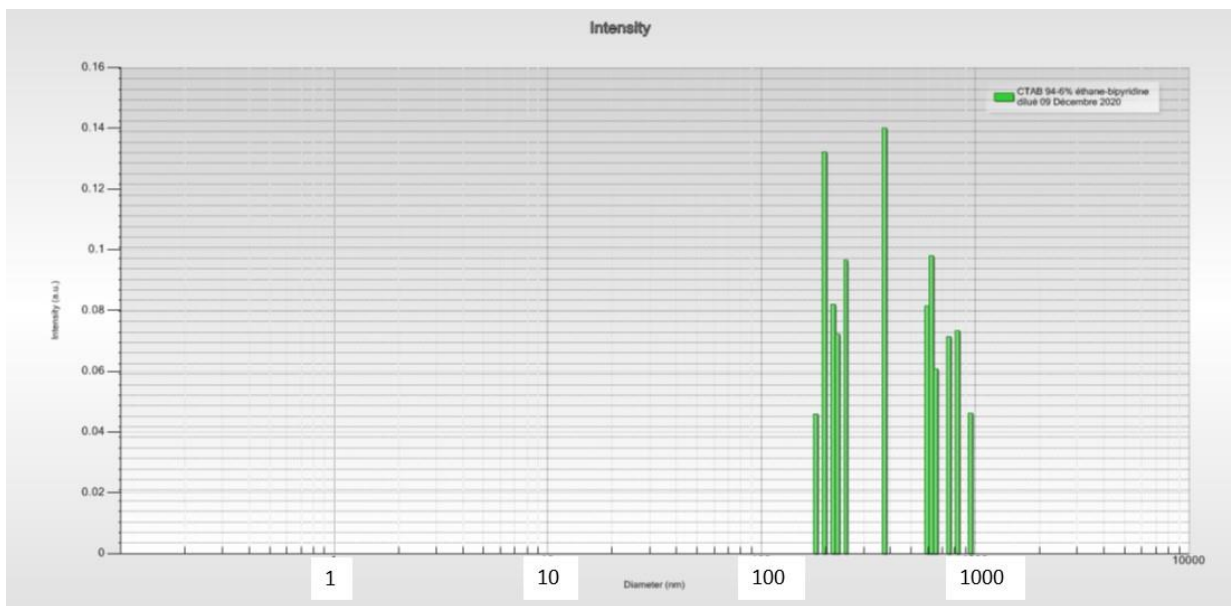


**Figure S5.** FTIR-ATR of iPrbipyPMO NPs

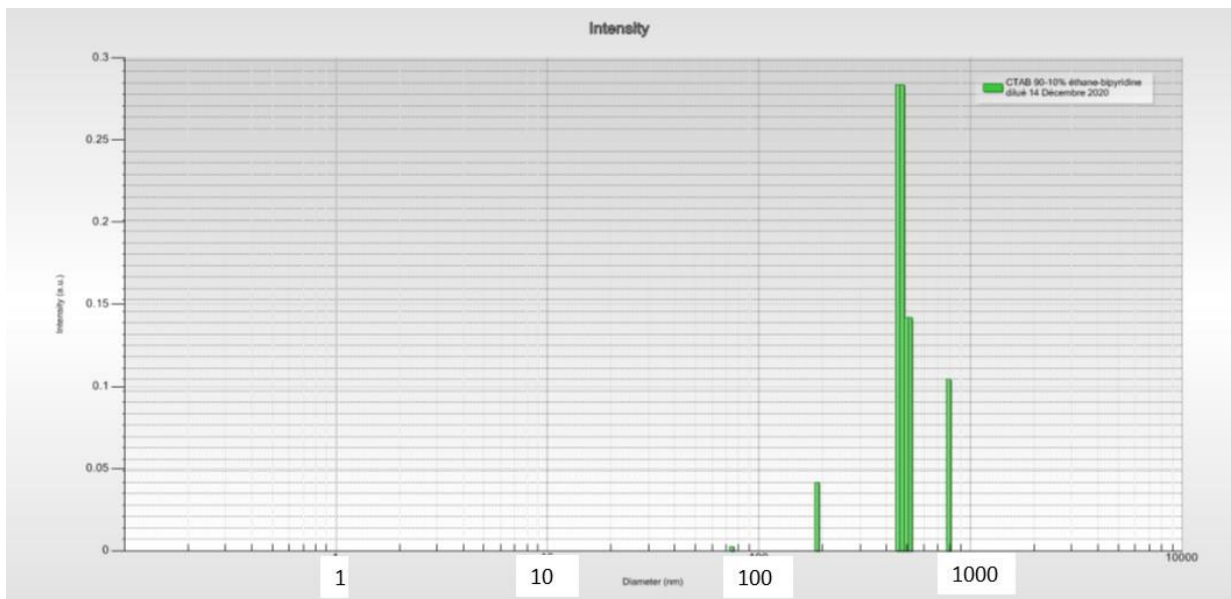
**Table S2,** Microanalyses of PMO1 NPs and iPrbipyPMO NPs

PMO NPs	% C	% H	% N	% O	% Si
PMO 1 NPs (100% ethane)	18.298	4.358	0.156	6.099	71.089
iPrbipyPMO 6 NPs (94/6% ethane/bipyridine)	19.374	3.934	0.976	3.143	72.573
iPrbipyPMO 10 NPs (90/10% ethane/bipyridine)	21.546	3.854	2.214	3.428	68.958

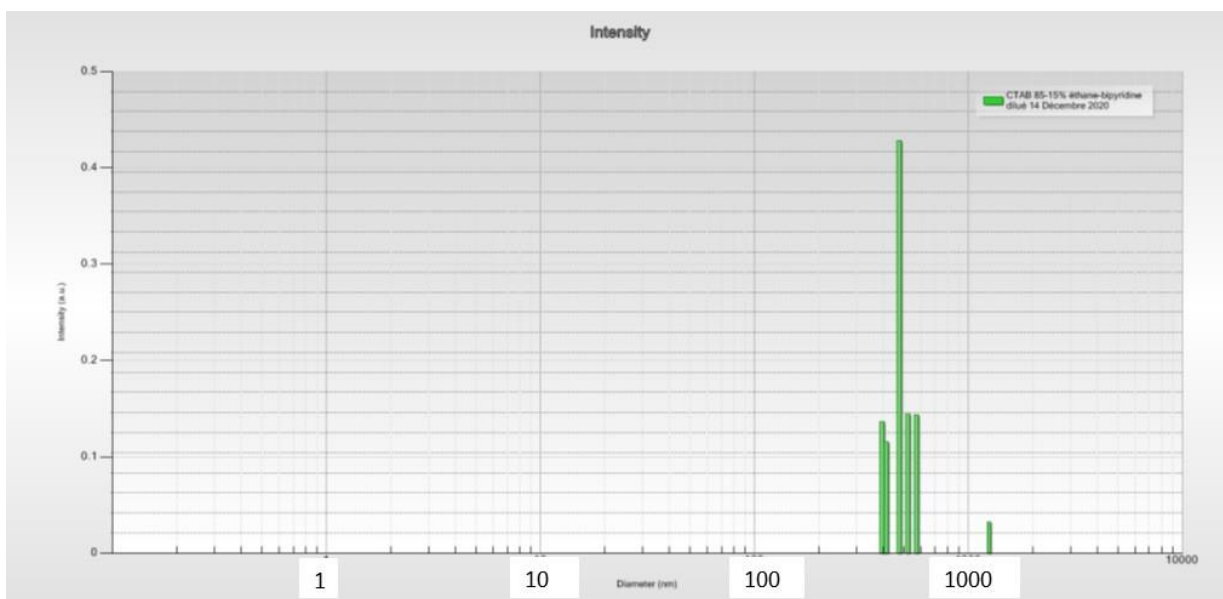
iPrbipyPMO 15 NPs (85/15% ethane/bipyridine)	28.011	3.923	4.315	4.466	59.285
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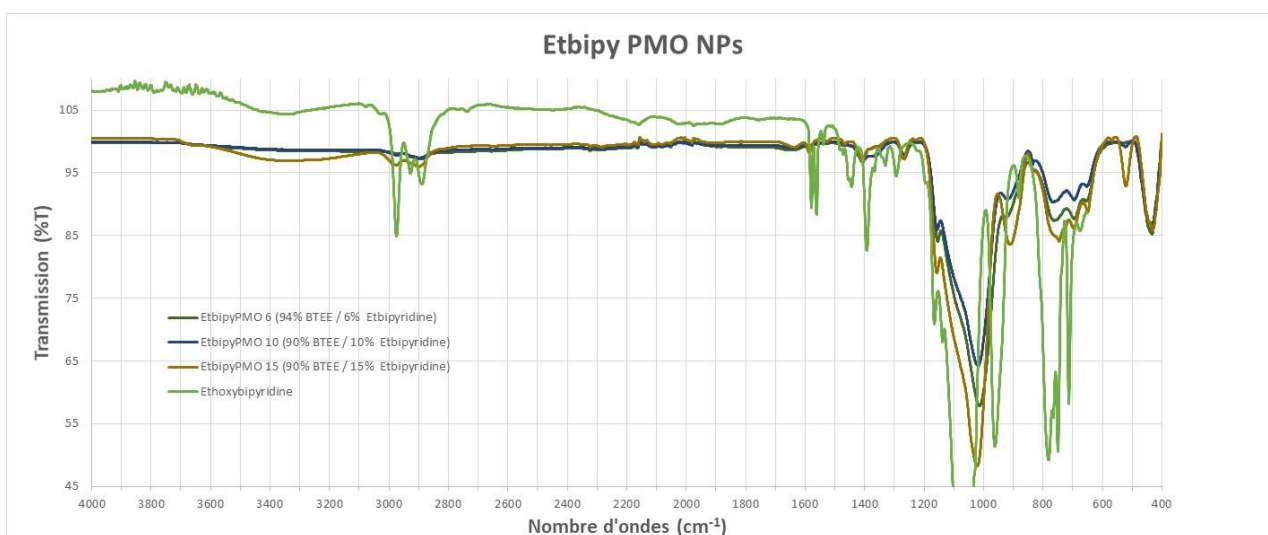
**Figure S6.** DLS of iPrbipyPMO 6 NPs in EtOH intensity mode



**Figure S7.** DLS of iPrbipyPMO 10 NPs in EtOH intensity mode



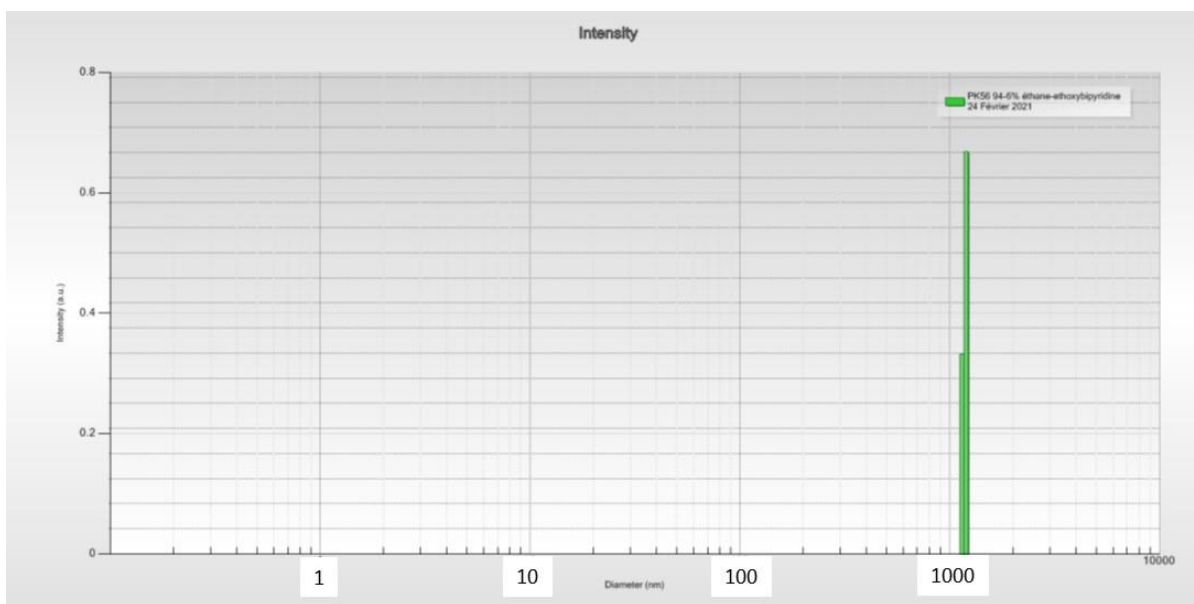
**Figure S8.** DLS of iPrbipyPMO 15 NPs in EtOH intensity mode



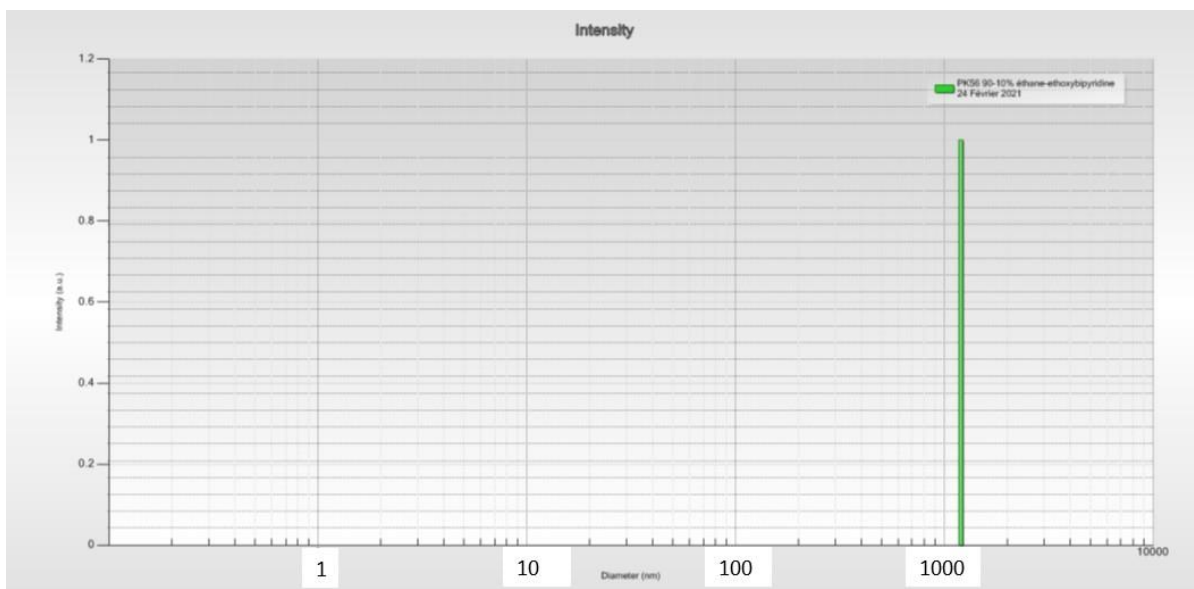
**Figure S9.** FTIR-ATR of EtbipyPMO NPs

**Table S3,** Microanalyses of PMO1 NPs and EtbipyPMO NPs

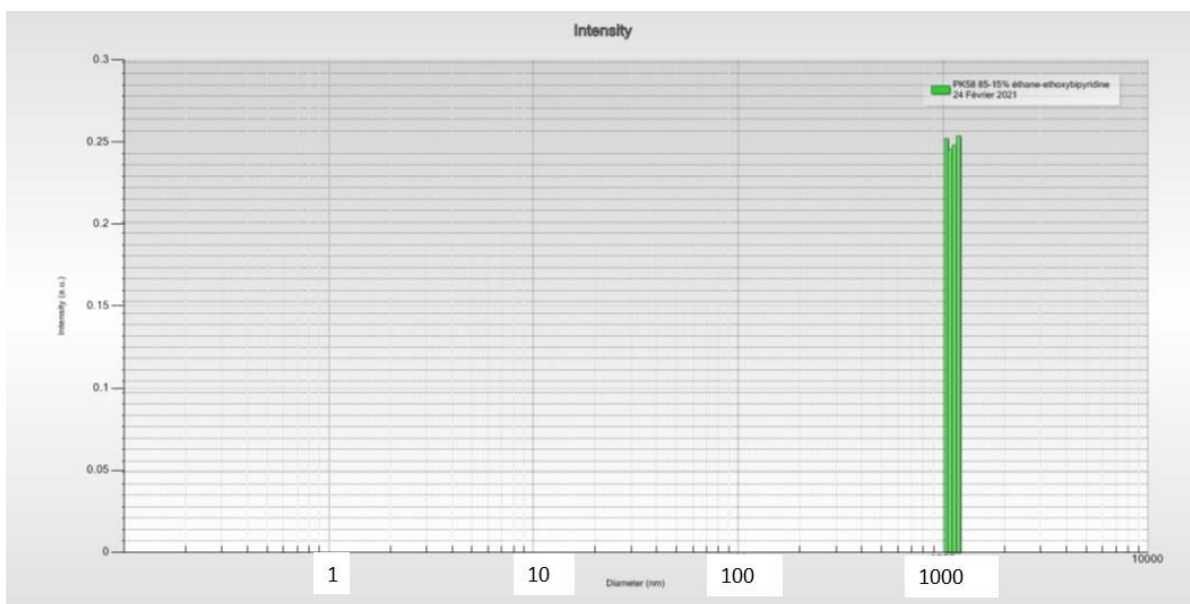
PMO NPs	% C	% N
PMO 1 NPs (100% éthane)	18.298	0.156
EtbipyPMO 6 NPs (94% éthane / 6% Etbipyridine)	14.710	0.461
EtbipyPMO 10 NPs (90% éthane / 10% Etbipyridine)	16.742	0.855
EtbipyPMO 15 NPs (85% éthane / 15% Etbipyridine)	18.162	1.670



**Figure S10.** DLS of EtPrbipyPMO 6 NPs in EtOH intensity mode



**Figure S11.** DLS of EtbipyPMO 10 NPs in EtOH intensity mode



**Figure S12.** DLS of EtbipyPMO 15 NPs in EtOH intensity mode