# Supporting Information

## Ce and P123 modified layered double hydroxide (LDH) composite for the synthesis of polypropylene glycol monomethyl ether

Xiaoyan Cao,[a, b] Lingxin Kong,[a, b] Zhenggui Gu,[a, b]* Xiao Xu,[a] *

[a.] *School of Chemistry and Materials Science, Nanjing Normal Univesity, Nanjing 210023, China;*
[b.] *Jiangsu Provincial Key Laboratory of Materials Cycling and Pollution Control, Nanjing Normal Univesity, Nanjing 210023, China;*
**Corresponding authors. Email: 07160@njnu.edu.cn (ZG. G.)；211102103@njnu.edu.cn (X. X.)*

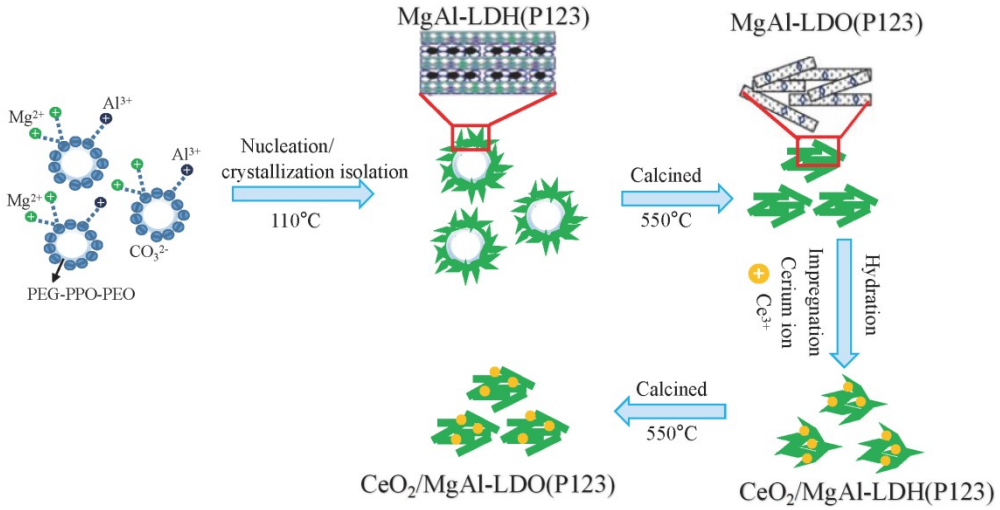


**Fig. S1** Mechanism diagram for $CeO_2$/MgAl-LDO(P123) formation.

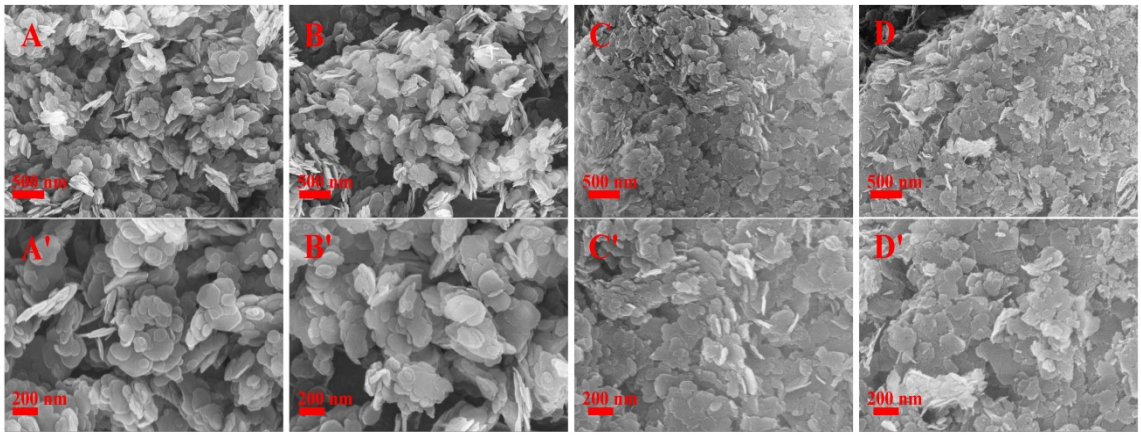


**Fig. S2** Different magnification SEM images of as-prepared materials: MgAl-LDH(P123) (A, A'), MgAl-LDO(P123) (B, B'), $CeO_2$/MgAl-LDH (P123) (C, C') and $CeO_2$/MgAl-LDO (P123) (D, D').

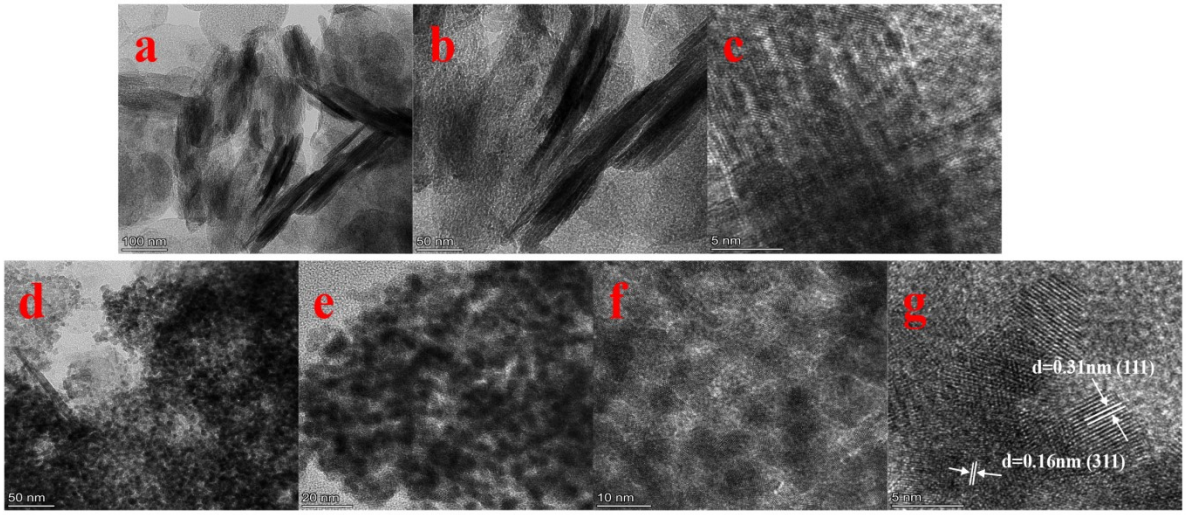


**Fig. S3** Different magnification TEM images of as-prepared materials: MgAl-LDO(P123) (a, b, c), and $CeO_2$/MgAl-LDO (P123) (d, e, f, g).

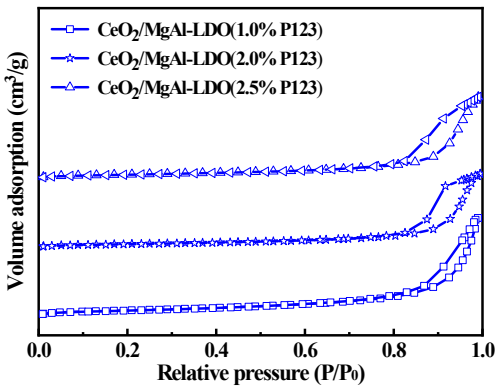


**Fig. S4** $N_2$ adsorption–desorption isotherms of as-prepared materials.