

## Supplementary Information

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### Fabrication of mesoporous carbon supported Ni-Mo catalyst for the enhanced conversion of glucose to ethylene glycol

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- Fig. S1** Nitrogen adsorption-desorption isotherms of Ni-Mo/MC catalysts.
- Fig. S2** NH<sub>3</sub>-TPD profiles of reduced 3% Ni/MC, 15% Mo/MC and 3% Ni-15% Mo/MC.
- Fig. S3** TEM images of used 3% Ni-15% Mo/MC.
- Fig. S4** FT-Raman spectra of MC, reduced 3% Ni-15% Mo/MC and used 3% Ni-15% Mo/MC.
- Table S1** Crystallite size of MoO<sub>3</sub> and MoO<sub>2</sub> present in x Ni-y Mo/MC catalysts.
- Table S2** Comparative catalytic conversion of glucose into EG.

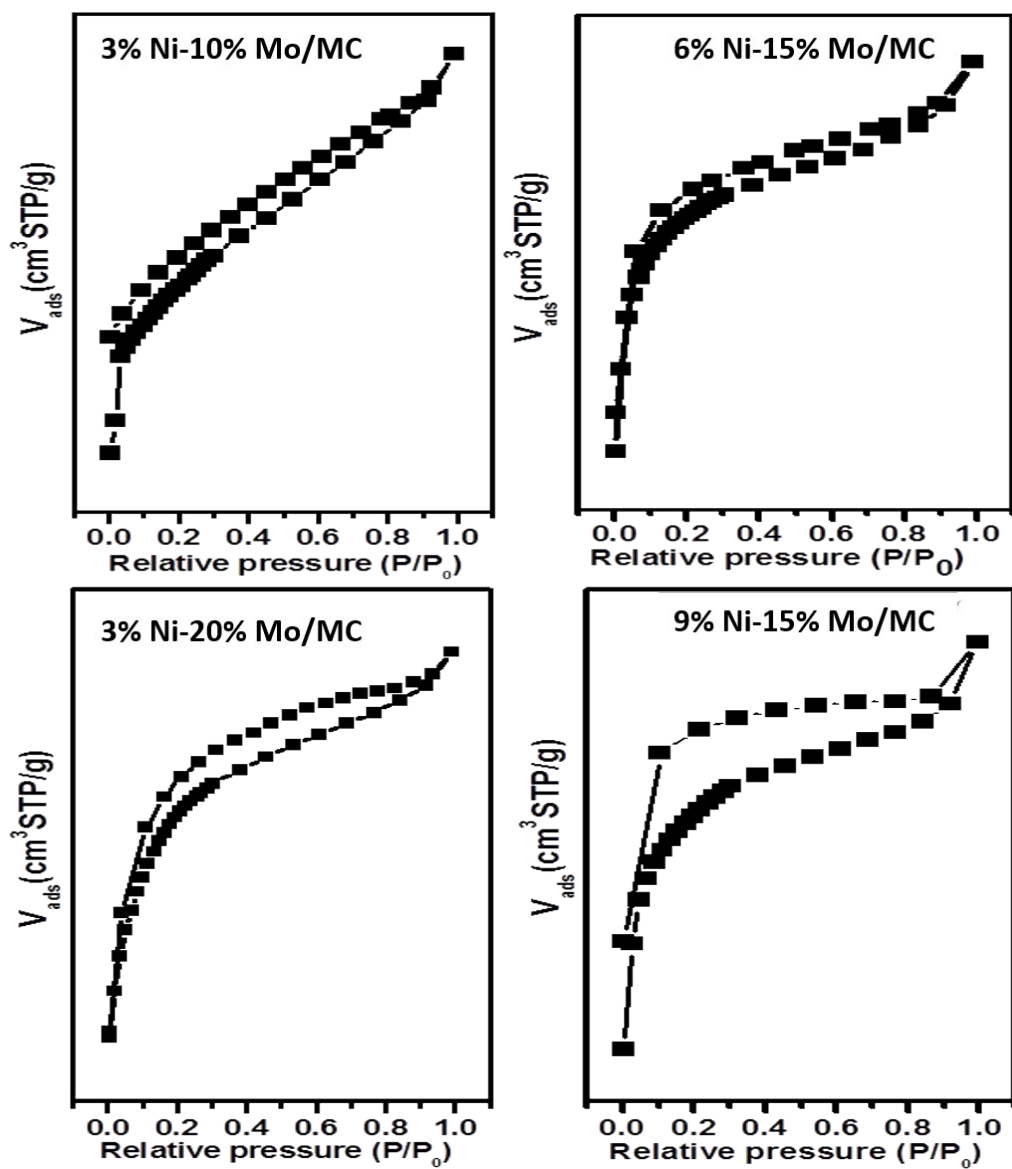
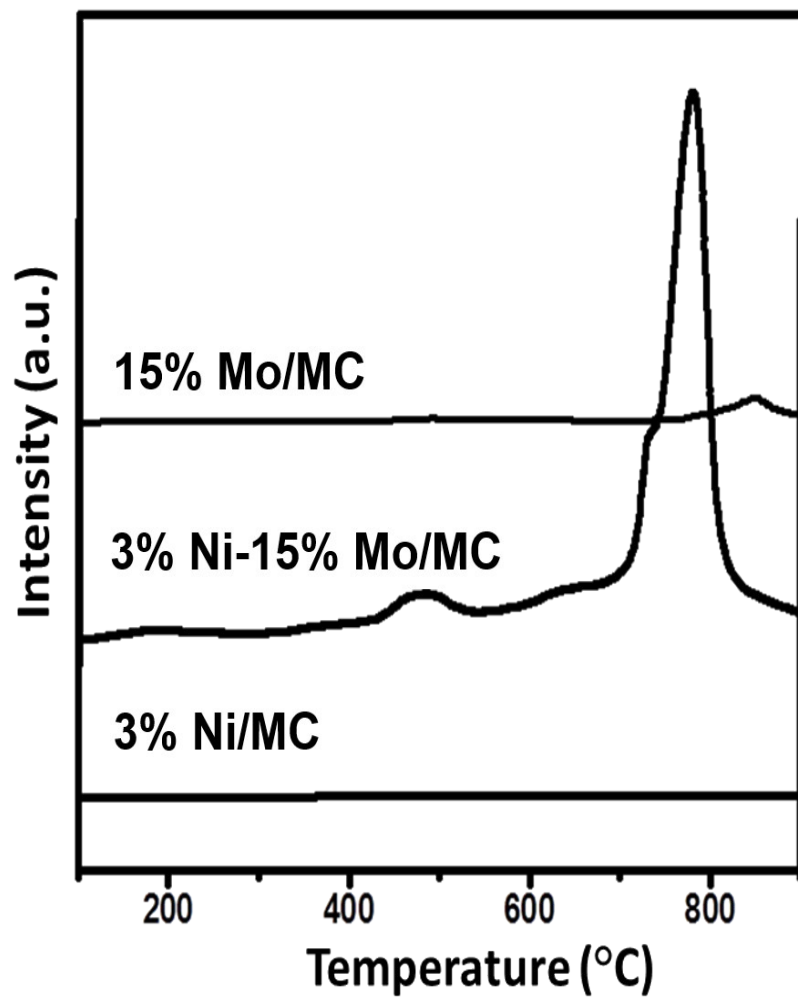
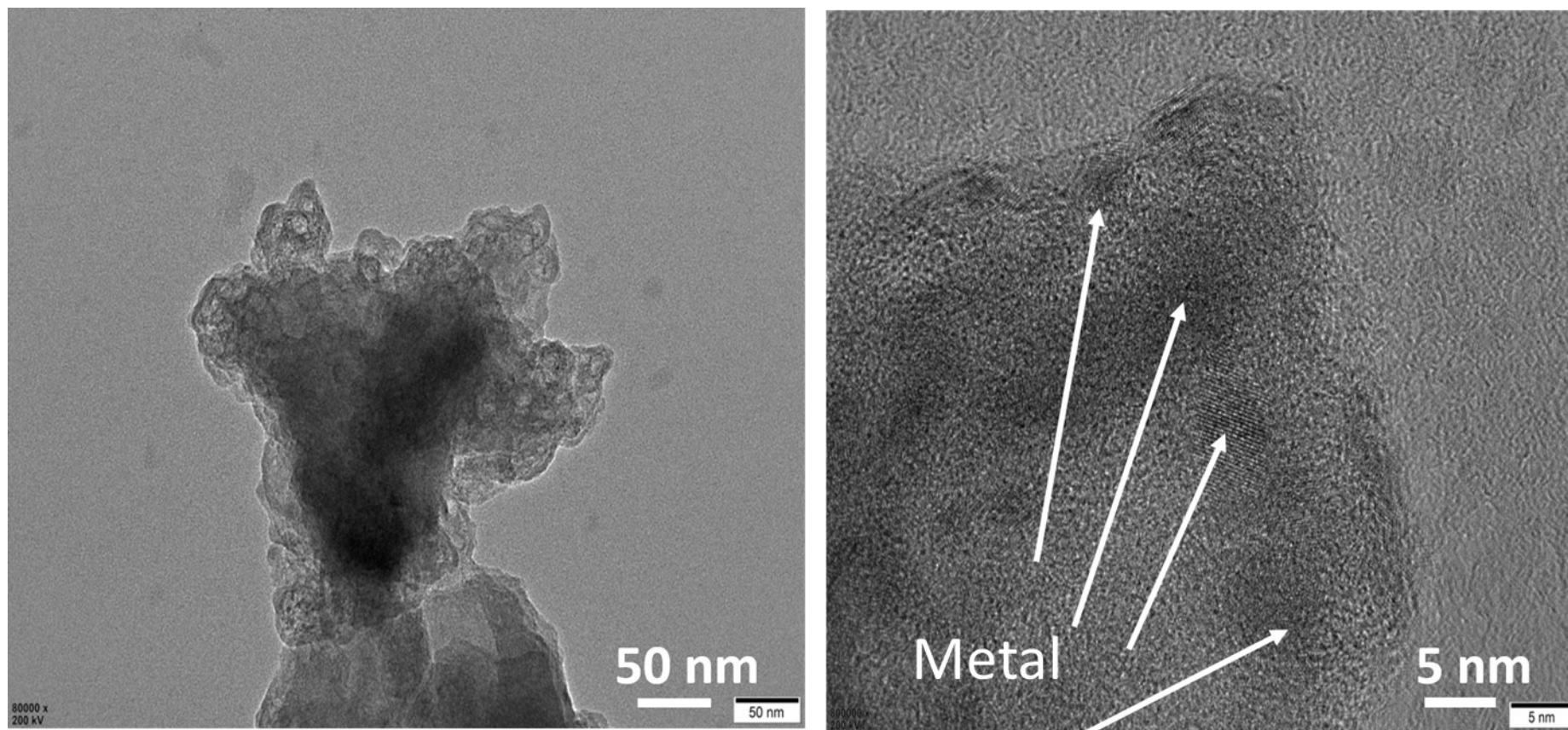


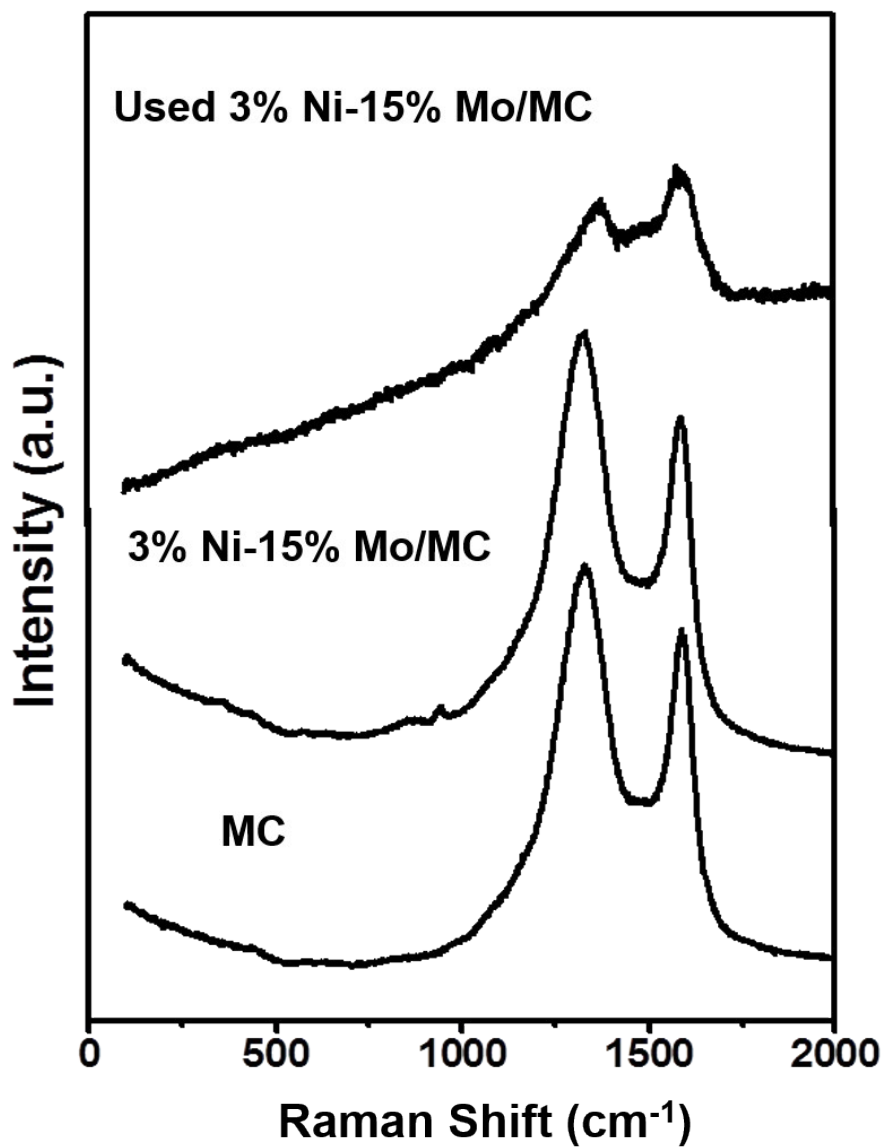
Fig. S1 Nitrogen adsorption-desorption isotherms of Ni-Mo/MC catalysts.



**Fig. S2** NH<sub>3</sub>-TPD profiles of reduced 3% Ni/MC, 15% Mo/MC and 3% Ni-15% Mo/MC.



**Fig. S3** TEM images of used 3% Ni-15% Mo/MC



**Fig. S4** FT-Raman spectra of MC, reduced 3% Ni-15% Mo/MC and used 3% Ni-15% Mo/MC.

**Table S1** Crystallite size of MoO<sub>3</sub> and MoO<sub>2</sub> present in x Ni-y Mo/MC catalysts

Catalyst	Crystallite size (nm)	
	MoO <sub>3</sub>	MoO <sub>2</sub>
3% Ni -15% Mo/MC	19.5	8.5
6% Ni- 15% Mo/MC	17.5	7.1
9% Ni-15% Mo/MC	14.2	10.4

**Table S2** Comparative study on catalytic conversion of glucose into EG

Catalyst	Reaction conditions					Selectivity of EG (%)	References
	T (°C)	H <sub>2</sub> pressure (bar)	Reaction time (h)	Glucose concentration in the feed (%)	Reactor type		
Ru-AMT/AC	240	50	0.67	10	Semi-continuous	60	[16]
Ru-AMT/AC	240	50	0.67	10	Batch	7	[16]
Ni-W <sub>2</sub> C/AC	245	60	3	20	Batch	8	[10]
Ni-W <sub>2</sub> C/AC	245	60	3	20	Fed-batch	47	[10]
Ni-MgO	220	60	3	1	Batch	23	[20]
5% Ni-15% WO <sub>3</sub> /SBA-15	175	60	1.33	1.25	Batch	41.5	[5]
3% Ni-15% Mo/MC	200	40	6	15%	Batch	63.2	Present work