

## **Supporting Information**

# **Direct evidence of time-dependent crystallization evolution of SAPO-34 and SAPO-20 zeolites directed by trimethylbenzylammonium hydroxide for microwave-assisted ethanolysis of furfuryl alcohol**

Guanchen Wang,<sup>1</sup> Najla AlMasoud,<sup>2</sup> Taghrid S. Alomar,<sup>2</sup> Yasmin Nadhirah Azman,<sup>1</sup> Pedro Maireles-Torres,<sup>3</sup> Stephen Chia,<sup>4</sup> Joon Ching Juan,<sup>5</sup> Tau Chuan Ling,<sup>6</sup> Zeinhom M. El-Bahy,<sup>7</sup> Eng-Poh Ng<sup>1,\*</sup>

<sup>1</sup>*School of Chemical Sciences, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia.*

<sup>2</sup>*Department of Chemistry, College of Science, Princess Nourah bint Abdulrahman University, P.O. Box 84428, Riyadh 11671, Saudi Arabia.*

<sup>3</sup>*Departamento de Química Inorgánica Cristalografía y Mineralogía (Unidad Asociada al ICP-CSIC), Facultad de Ciencias Campus de Teatinos, Universidad de Málaga, 29071 Málaga, Spain.*

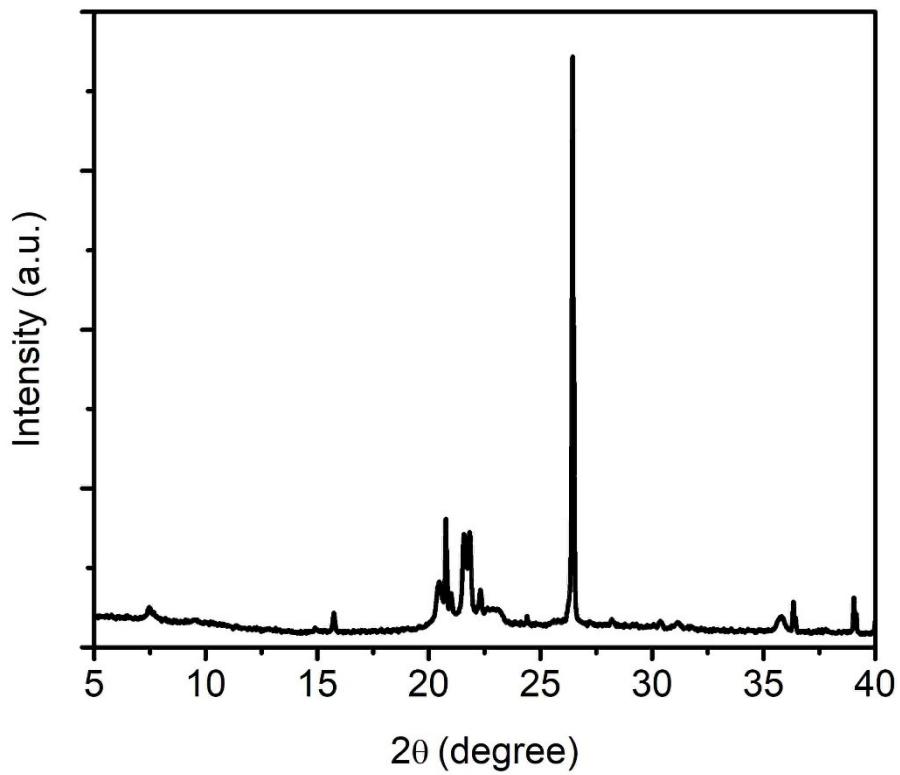
<sup>4</sup>*Centre for Global Archaeological Research, Universiti Sains Malaysia, 11800, USM, Penang, Malaysia*

<sup>5</sup>*Nanotechnology & Catalysis Research Centre (NANOCAT), Universiti Malaya, 50603, Kuala Lumpur, Malaysia.*

<sup>6</sup>*Institute of Biological Sciences, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia.*

<sup>7</sup>*Department of Chemistry, Faculty of Science, Al-Azhar University, Nasr City 11884, Cairo, Egypt.*

\*Corresponding author. Email: [epng@usm.my](mailto:epng@usm.my)



**Fig. S1.** XRD pattern of solid product after 20 h of hydrothermal synthesis without BTMAOH structure-directing agent.