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SYNTHESIS OF SUPRAMOLECULAR SELF-ASSEMBLED BENZENE-1,3,5-TRICARBOXAMIDES AND THEIR LIQUID CRYSTALLINE PROPERTIES**Juan Matmin¹, Leny Yuliati², Salasiah Endud¹, Hendrik O. Lintang^{*2}**¹*Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia, 81310 Johor Bahru, Johor, Malaysia*²*Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia, 81310 Johor Bahru, Johor, Malaysia**Corresponding author: hendrik@ibnusina.utm.my

Supramolecular self-assembly of soft matter have received many attention for various applications such as liquid crystals, sensors, catalysts, and optics due to its precise control and easily tunable characteristics. Particularly, benzene-1,3,5-tricarboxamides (**BTAs**) as π -stacked organic motif were recognized for formation of liquid crystals materials; however, these **BTAs** were only reported bearing different short alkyl or aromatic side chains in order to have liquid crystalline properties. Herein, self-assemblies of **BTAs** (**C_RNH-BTA**, where **R** = **10**, **12**, **14**, **16**, and **18**) via hydrogen bonding interactions have been demonstrated as mesophase liquid crystalline materials by simply tuning its long hydrophobic alkyl chains attached to amide. Series of **BTAs** were synthesized by a Schotten-Baumann reaction using 1,3,5-benzenetricarbonyl trichloride with respected alkyl amides in the presence of triethylamine in dry tetrahydrofuran (THF) under an inert condition for overnight. Nuclear magnetic resonance (NMR), matrix-assisted laser desorption/ionization time-of-flight mass (MALDI-TOF-MS) and Fourier transform infrared spectroscopy (FT-IR) have proved the successful isolation of the hydrophobic **BTAs** using column chromatography as powdery solids. Scanning electron microscope (SEM) measurements showed self-assembled aggregation of a tape-like morphology with different aspect to ratio lengths corresponding to different alkyl side-chains lengths. Likewise, FT-IR spectra showed vibration bands at 1540 and 1719 cm^{-1} due to formation of N-H and C=O bondings, respectively, corresponding to the presence of hydrogen bonding interactions for all **BTAs**. Moreover, polarized optical microscopy (POM) showed spehrulitic-like texture upon isotropic melts at 140 °C monitored for 20 hours of **C₁₂NH-BTA**, strongly supports the characteristics of discotic liquid crystals for **BTAs**. In addition, differential scanning calorimetry (DSC) thermograms showed that longer alkyl side-chains shortened mesophase ranges due to the presence of higher steric hindrance of the alkyl amide chains.

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CHEMICAL CONSTITUENT FROM ROOT EXTRACT OF CASSIA SINGUEANA**Saidu Jibril*, Hasnah Mohd. Sirat*, Norazah Basar***Department of Chemistry, Faculty of Science, Universiti Teknologi Malaysia, 81310 Skudai, Johor, Malaysia**Corresponding author: saidu.jibril@fukashere.edu.ng, hasnah@kimia.fs.utm.my

Cassia singueana Linn. one of the species of Caesalpiniaceae is used for the treatment of various diseases by traditional medicine practitioners in Northern Nigeria. In this research, extraction of *Cassia singueana* root was carried out by soxhlet extraction technique and