Supporting Information

Lipid Pore-Filled Silica Thin Film Membranes for Biomimetic Recovery of Dilute Carbohydrate

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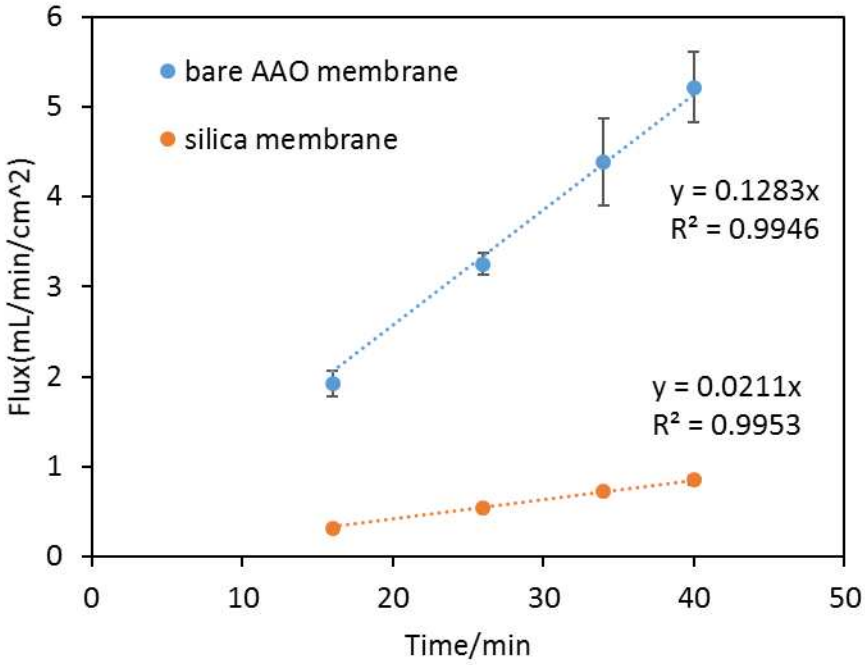

Figure S1. Ethanol flux as a function of pressure drop.

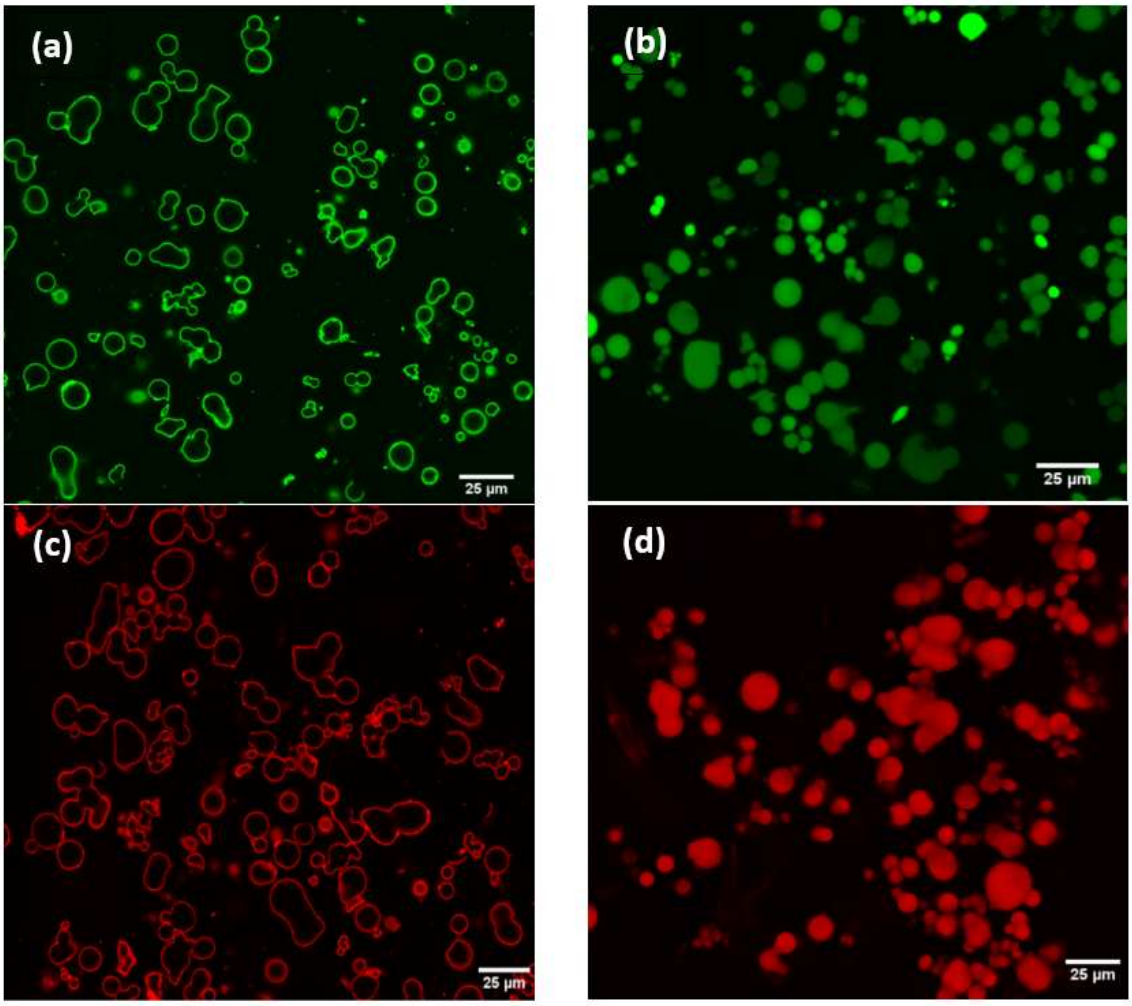

Figure S2: Confocal microscopy images of (a) lipid enveloped silica particle; (b) lipid filled silica particles; (c) lipid-BA enveloped silica particle; (d) lipid-BA filled silica particles. Lipid is tagged with green fluorescent DiO and boronic acid (BAMP-BA) is complexed with ARS to give red fluorescence.

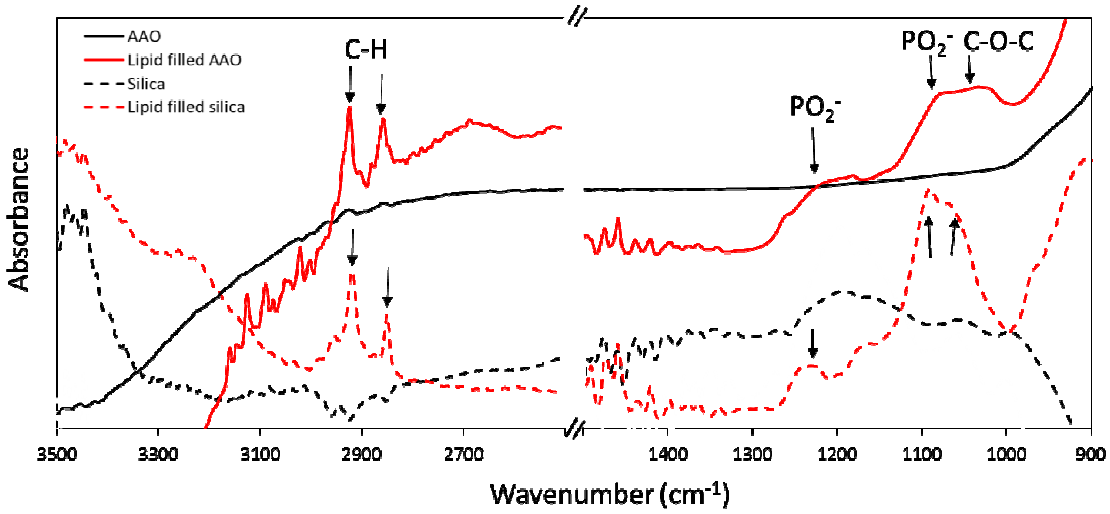

Figure S3. ATR-FTIR spectra of bare AAO, silica, lipid filled AAO and lipid filled silica membrane.

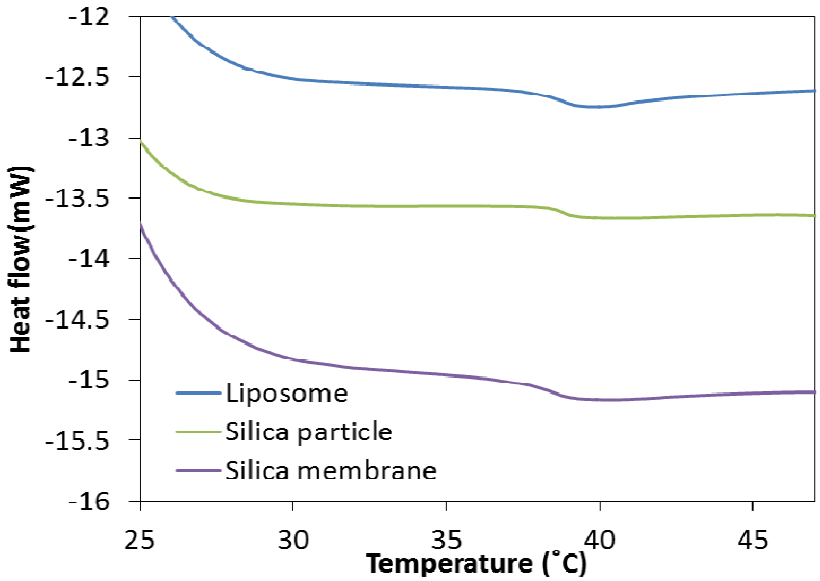

Figure S4. Gel to fluid phase behavior of BAMP-BA immobilized liposome, lipid-filled silica particles and lipid-filled silica membrane as measured by DSC (59 mol% BAMP-BA).