

Supporting Information for:

Sustainable approach for Cellulose aerogel preparation from the DBU-CO₂ Switchable Solvent

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I. Effect of coagulating solvent and super base on apparent density of cellulose aerogel

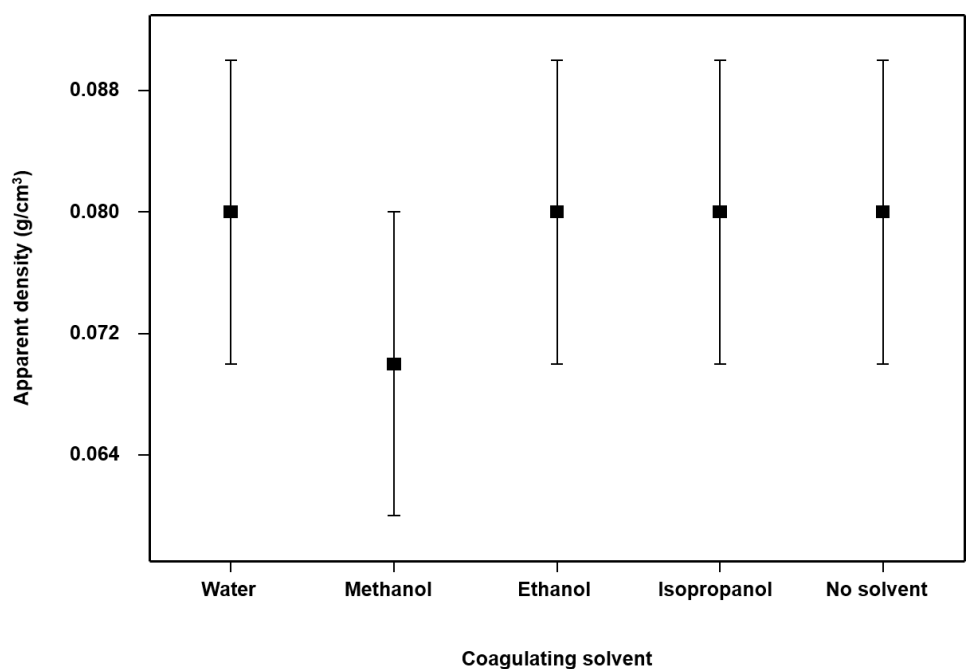


Figure SI 1: Effect of coagulating solvent on the apparent density of cellulose aerogel using 5 wt.% MC and DBU as a super base.

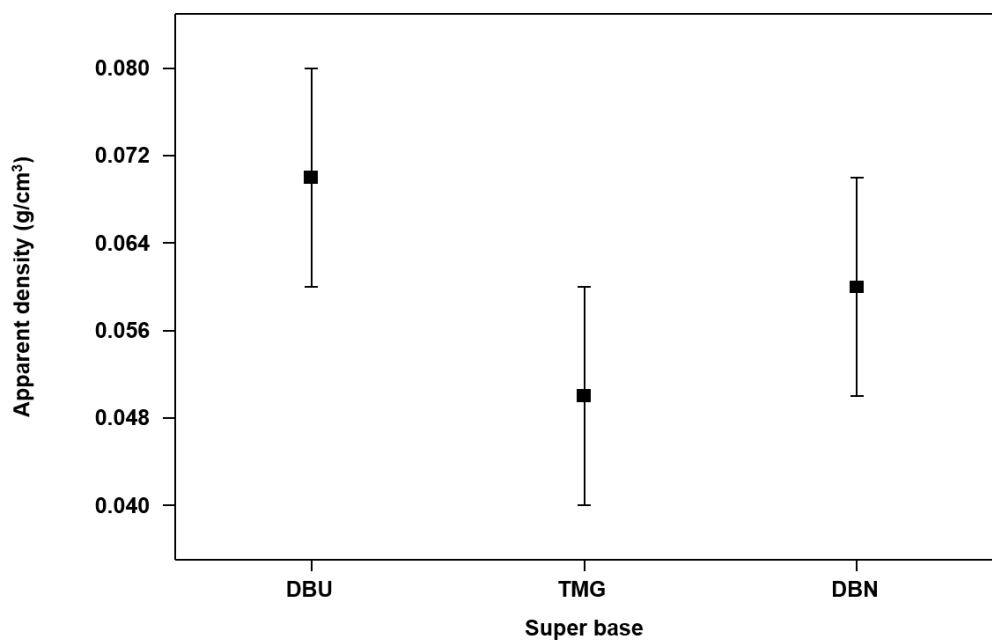


Figure SI 2: Effect of the super base on the apparent density of cellulose aerogel using 5 wt.% MCC and methanol coagulation.

II. Morphology studies *via* SEM of cellulose aerogels under various processing conditions

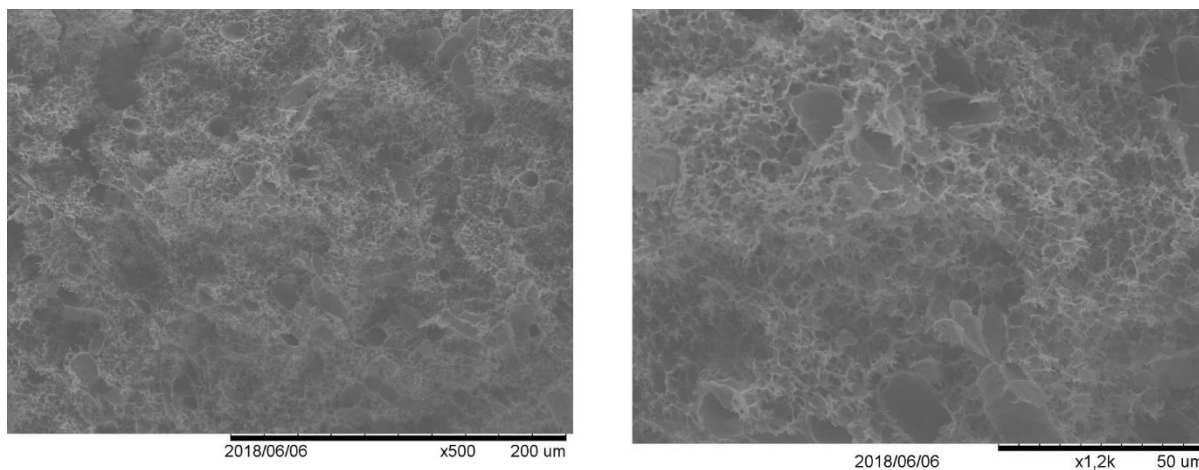


Figure SI 3: SEM image of cellulose aerogel from freeze-drying (using 7 wt.% MCC, DBU as a super base and water coagulation).

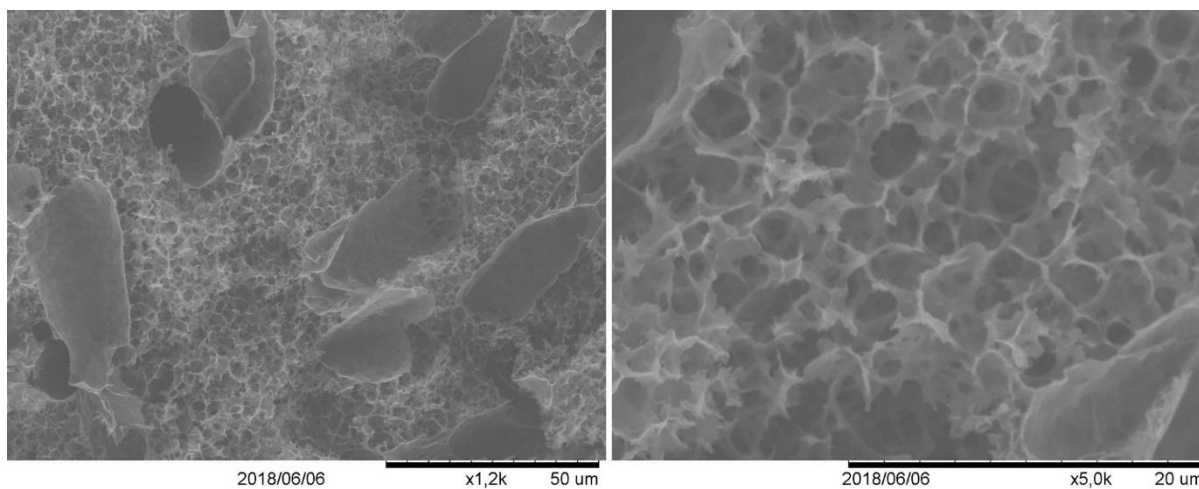


Figure SI 4: SEM image of cellulose aerogel from freeze-drying (using 10 wt.% MCC, DBU as super base and water coagulation).

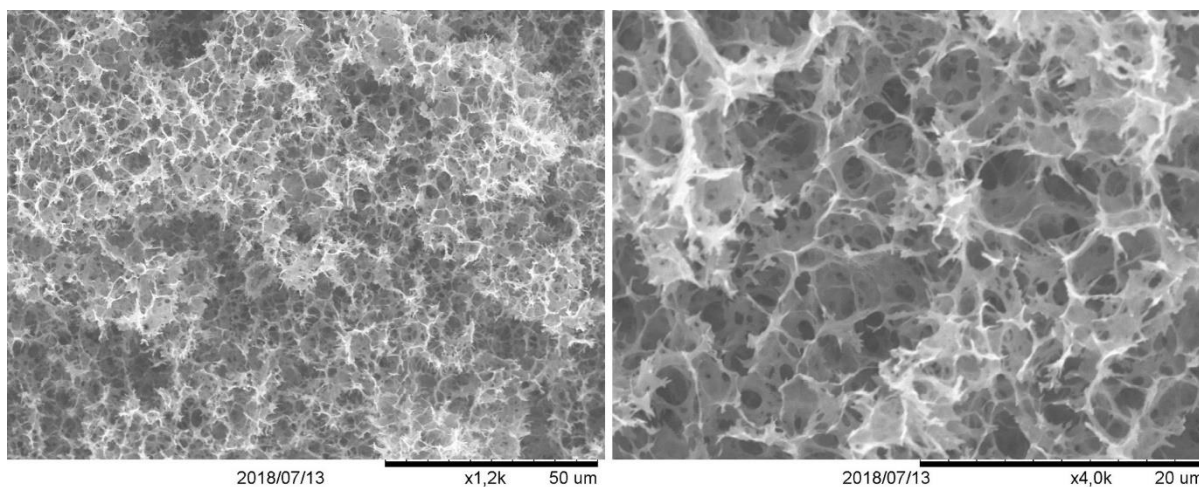


Figure SI 5: SEM image of cellulose aerogel from freeze-drying (using 7 wt.% MCC, DBU as super base and methanol coagulation).

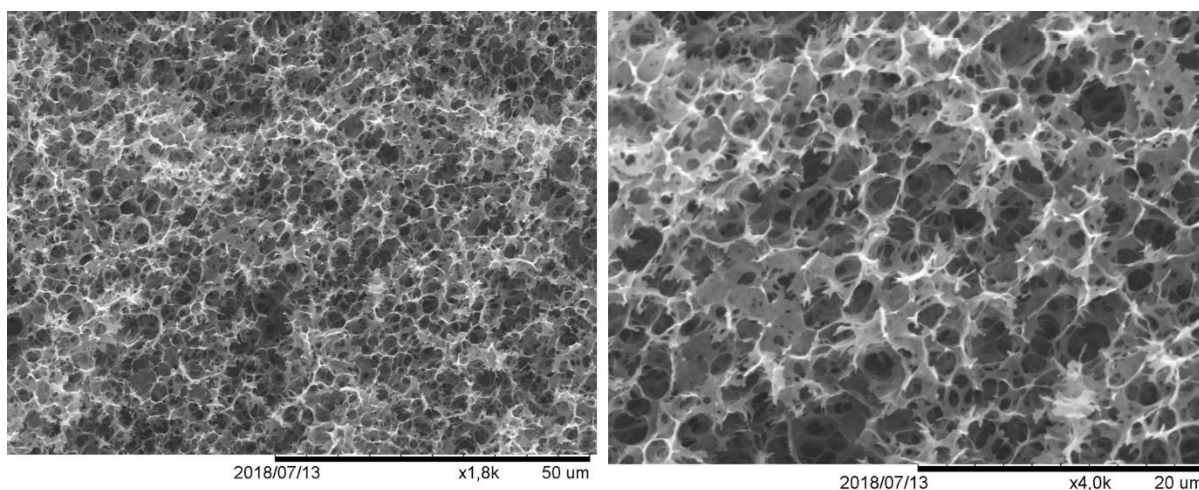


Figure SI 6: SEM image of cellulose aerogel from freeze-drying (using 10 wt.% MCC, DBU as super base and methanol coagulation).

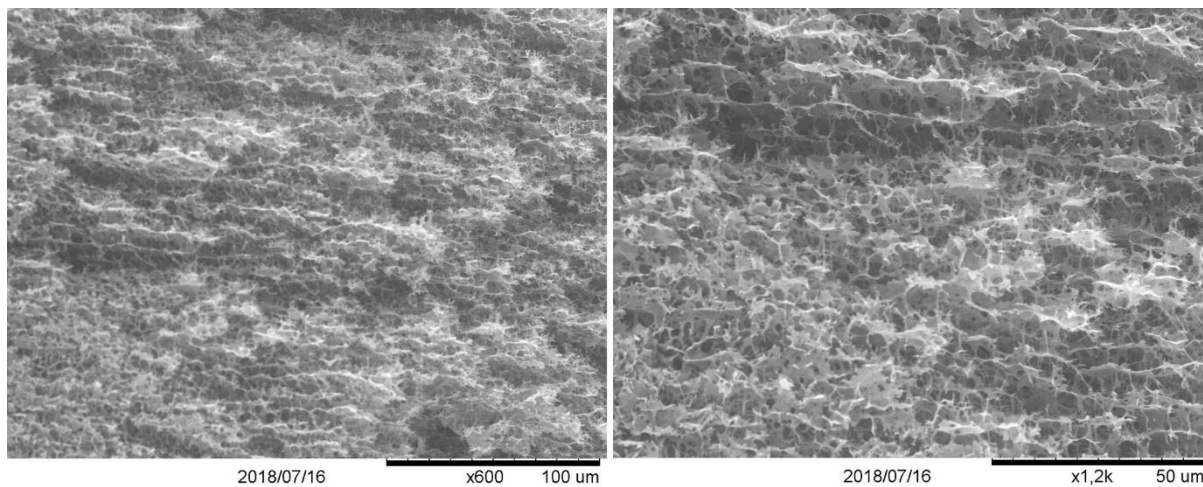


Figure SI 7: SEM image of cellulose aerogel from freeze-drying (using 5 wt.% MCC, TMG as super base and methanol coagulation).

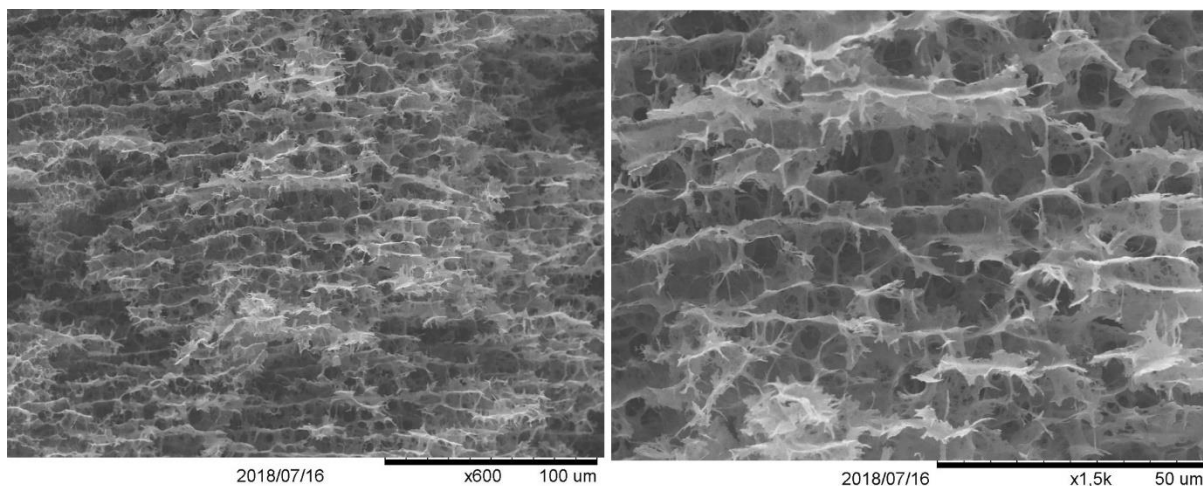


Figure SI 8: SEM image of cellulose aerogel from freeze-drying (using 5 wt.% MCC, DBN as super base and methanol coagulation).

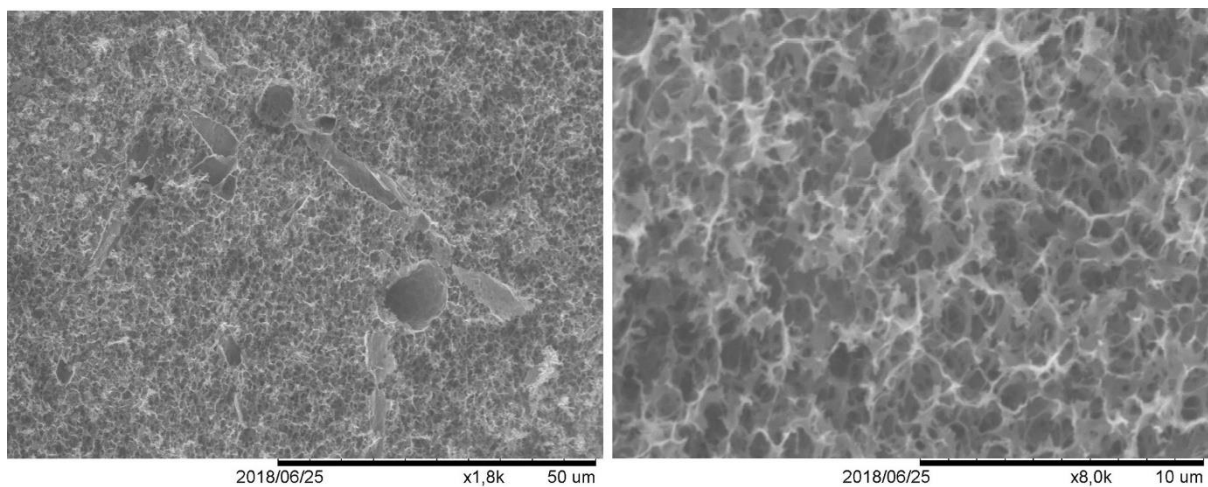


Figure SI 9: SEM image of cellulose aerogel from freeze-drying (using 3 wt.% CP, DBU as super base and water coagulation).

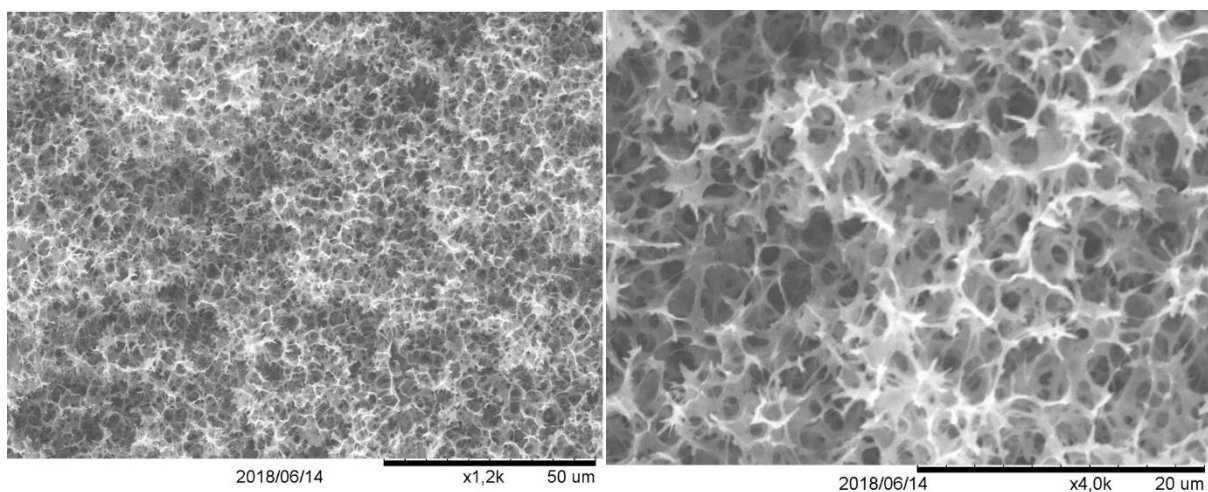


Figure SI 10: SEM image of cellulose aerogel from freeze-drying (using 3 wt.% CP, DBU as super base and ethanol coagulation).

III. Effect of coagulating solvent and super base on pore size of cellulose aerogel

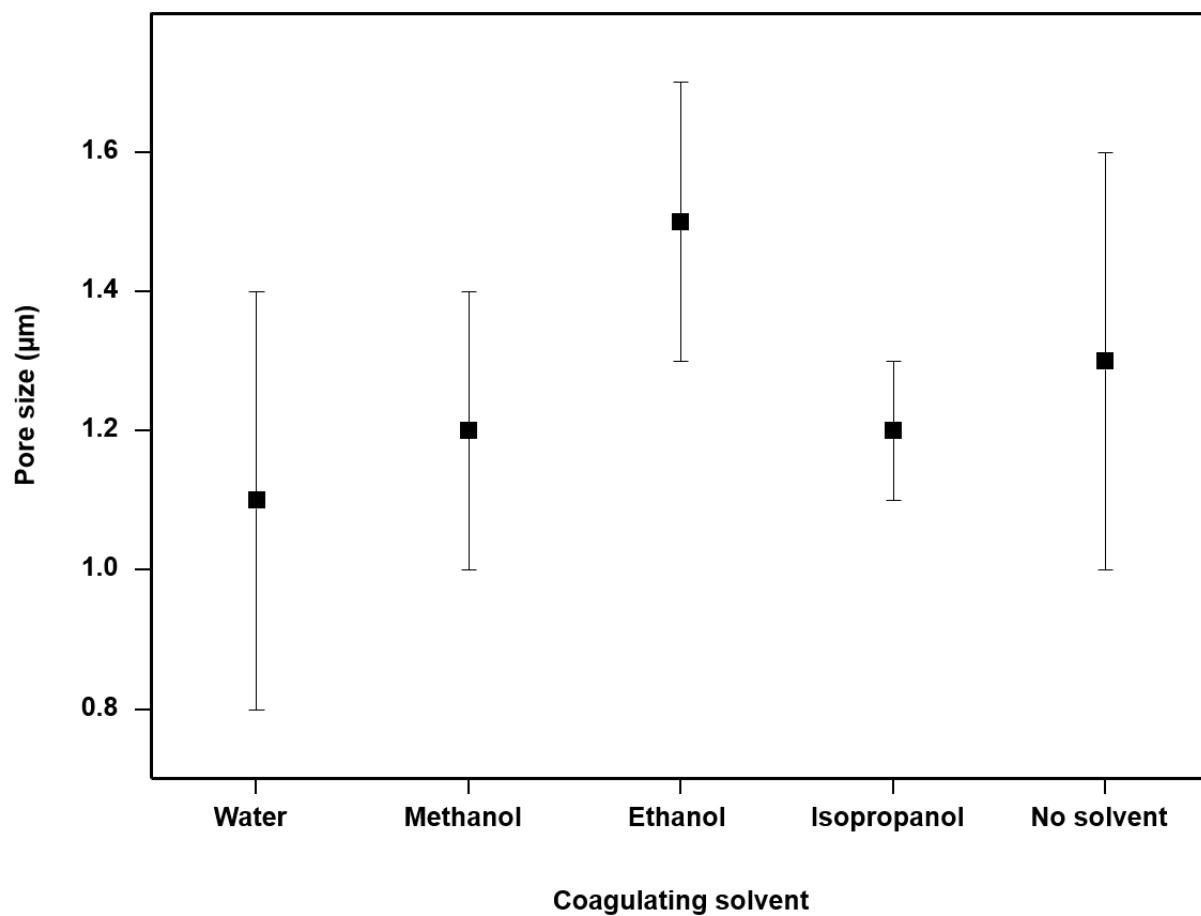


Figure SI 11: Effect of coagulating solvent on the pore size of cellulose aerogel using 5 wt.% MC and DBU as a super base.

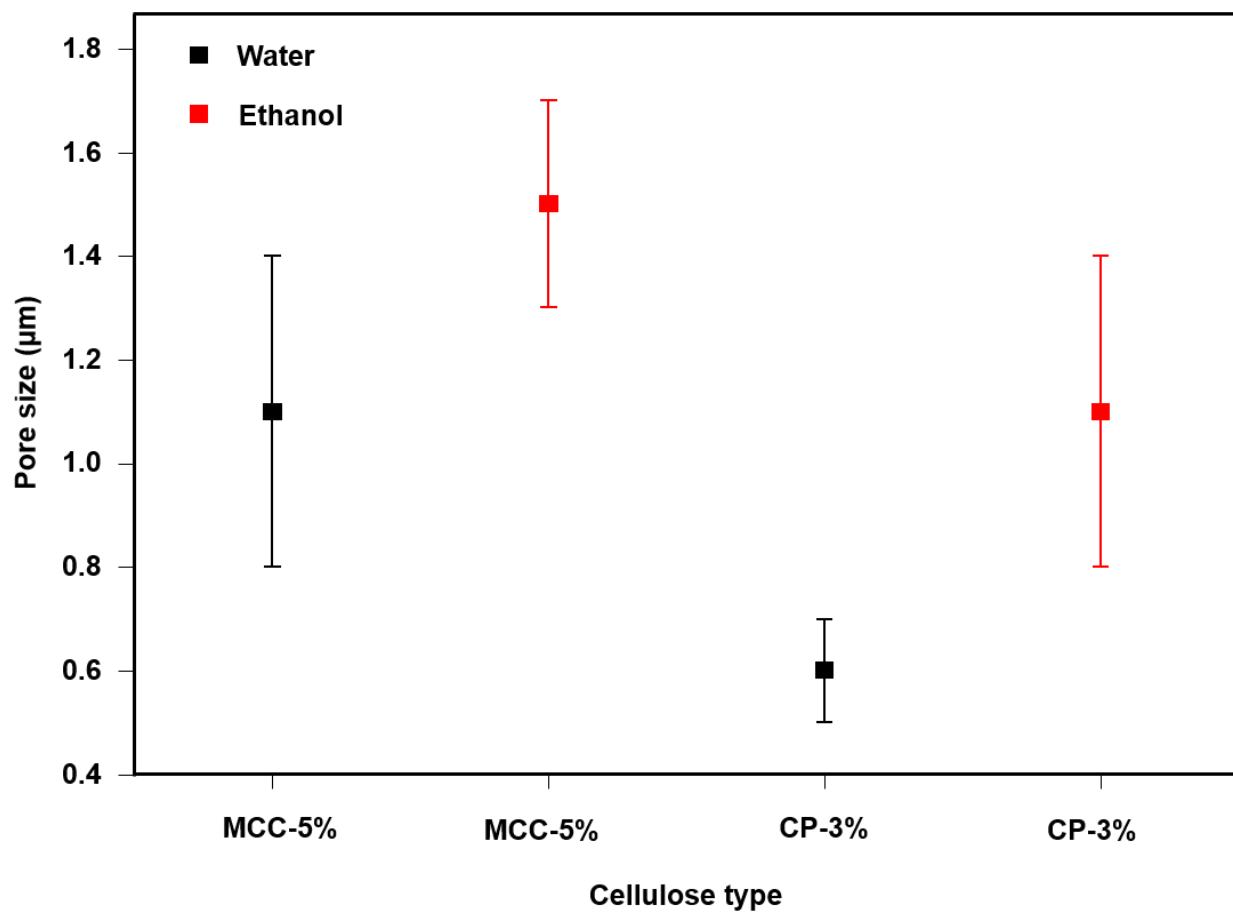


Figure SI 12: Effect of cellulose type and coagulating solvent on the pore size of cellulose aerogel using DBU as a super base.

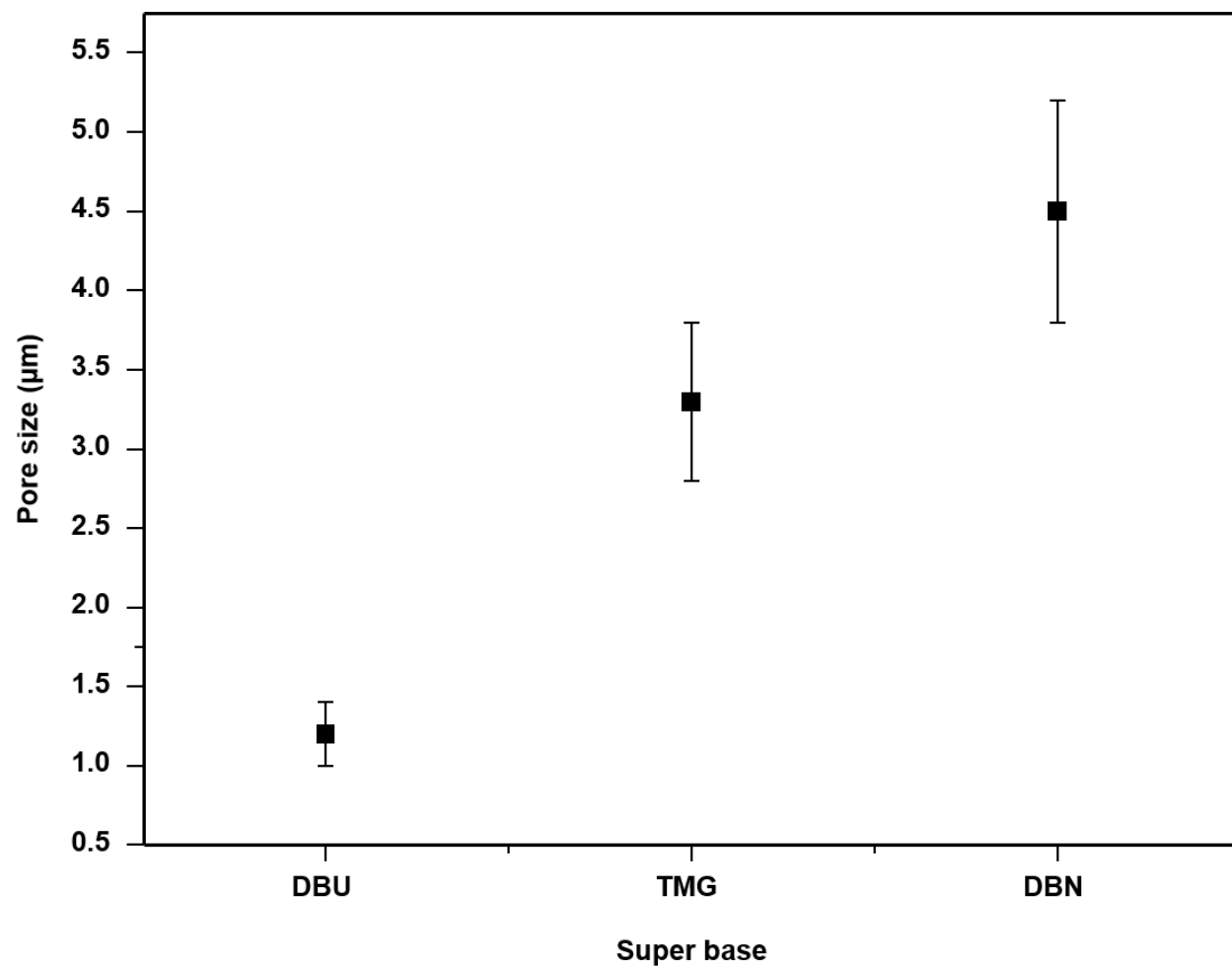


Figure SI 13: Effect of the super base on the porosity of cellulose aerogel using 5 wt.% MCC and methanol coagulation.

IV. FT-IR spectra comparison between native MCC and cellulose aerogel

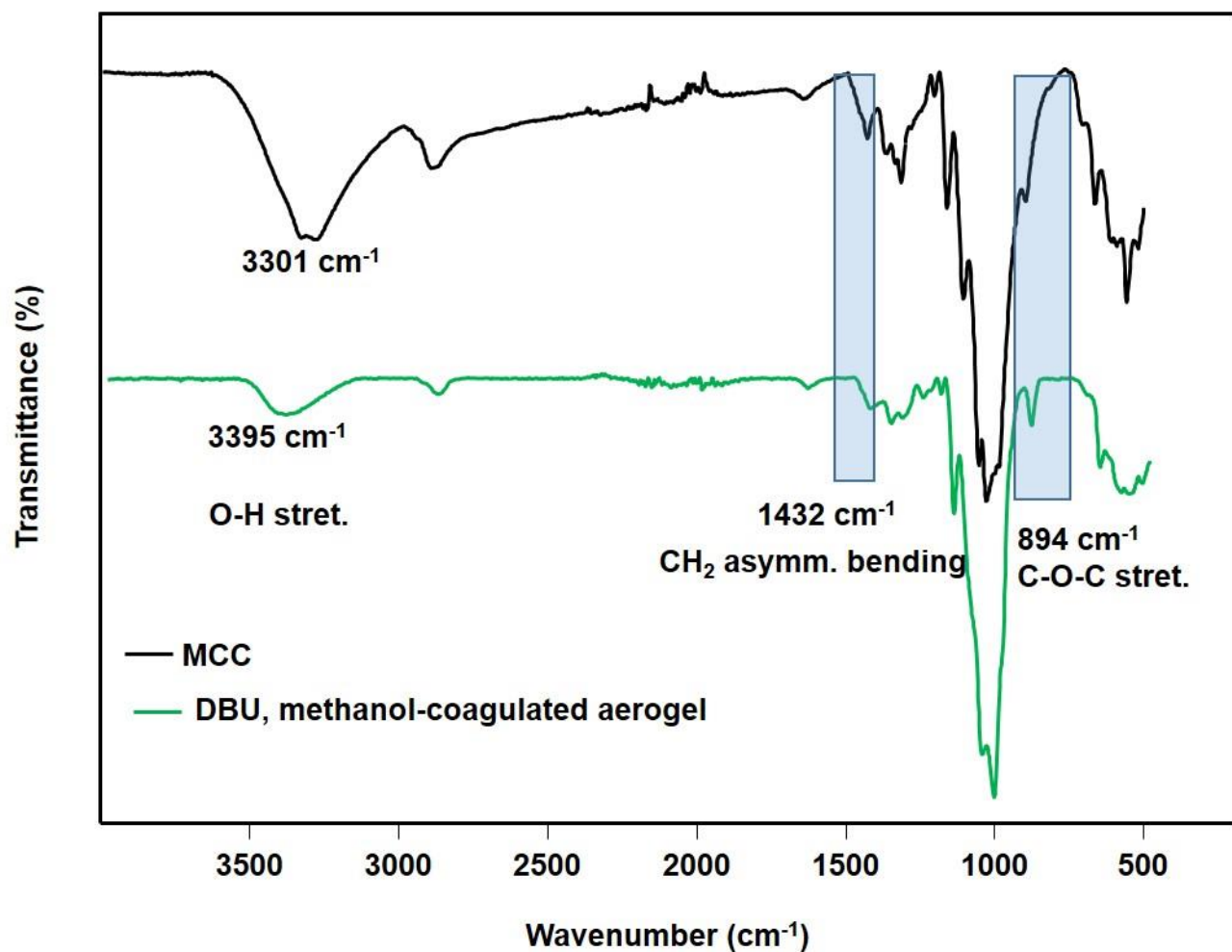


Figure SI 14: FT-IR spectra comparison between MCC and cellulose aerogel from freeze-drying (using 5 wt.% MCC, DBU as super base and methanol coagulation).

V. FT-IR spectra comparison between pure and recovered DBU and DMSO

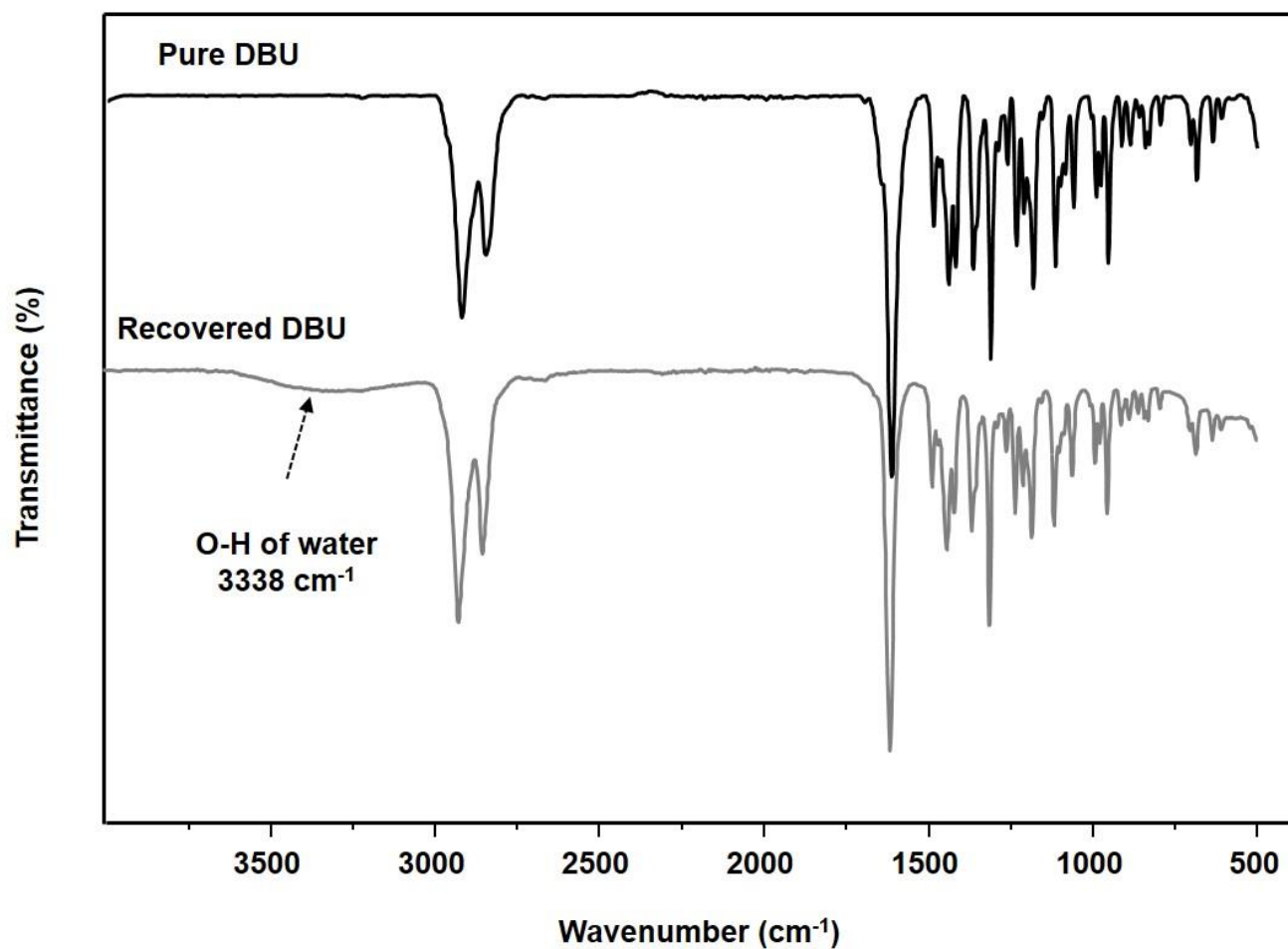


Figure SI 15: FT-IR spectra comparison between pure and recovered DBU (using 5 wt.% MCC, DBU as super base and methanol coagulation).

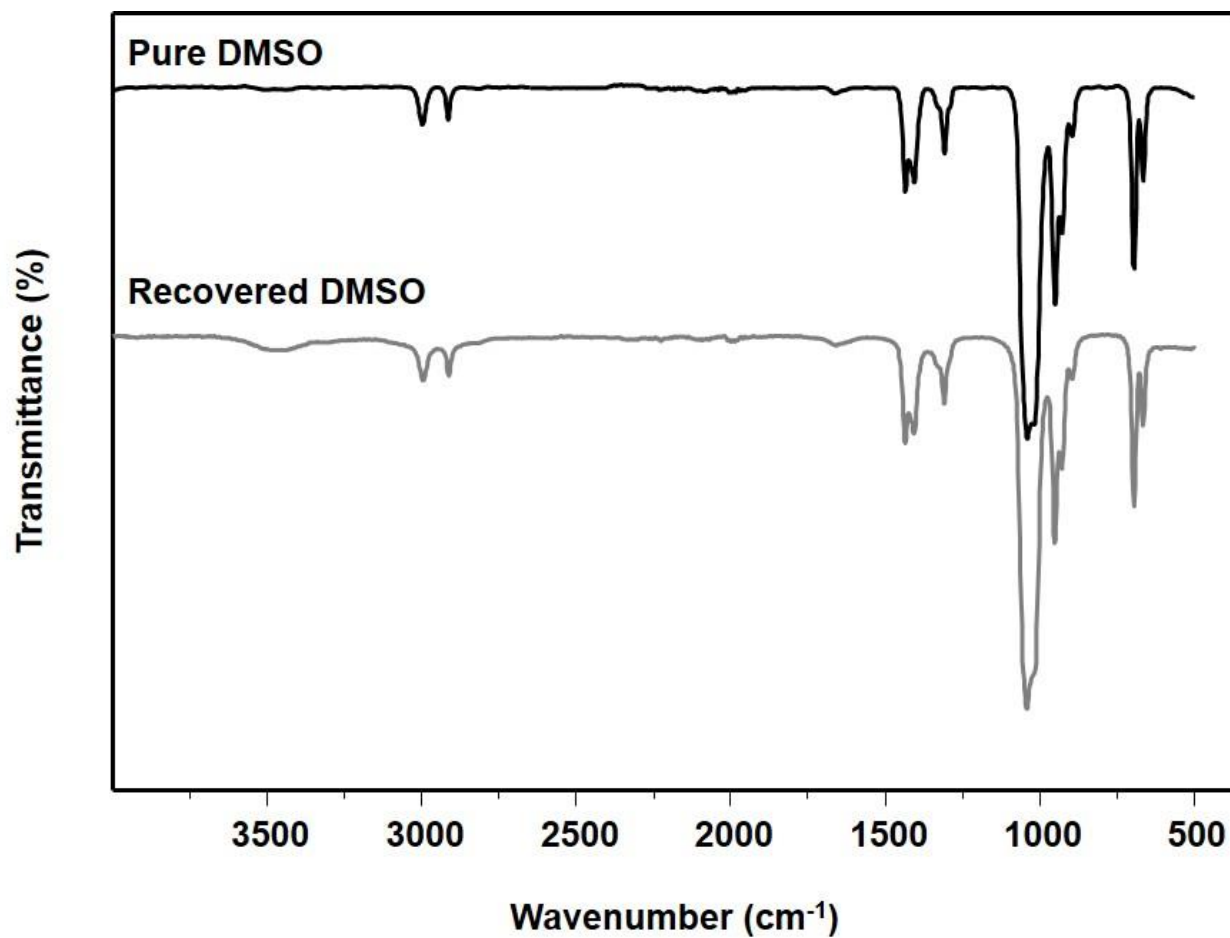


Figure SI 16: FT-IR spectra comparison between pure and recovered DMSO (using 5 wt.% MCC, DBU as super base and methanol coagulation).