

Preparation and Investigation of Aerogels from Crosslinked Polypropylenes

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Supporting Information

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IR spectra

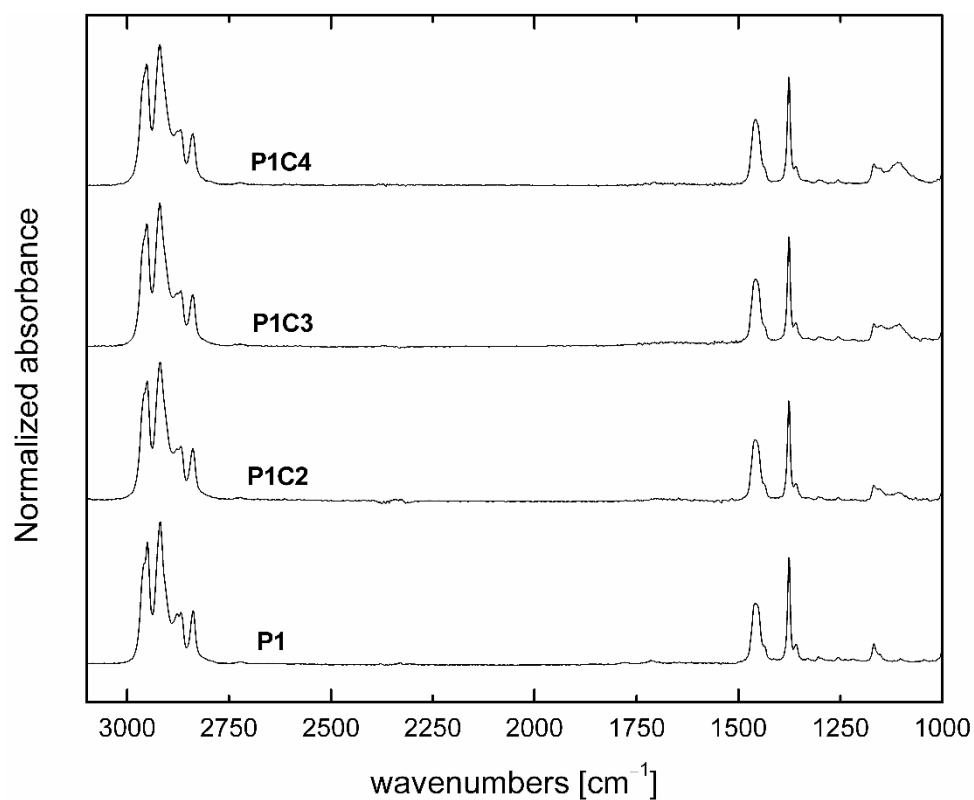


Figure S1 FTIR spectra of the crosslinked polymer **P1**.

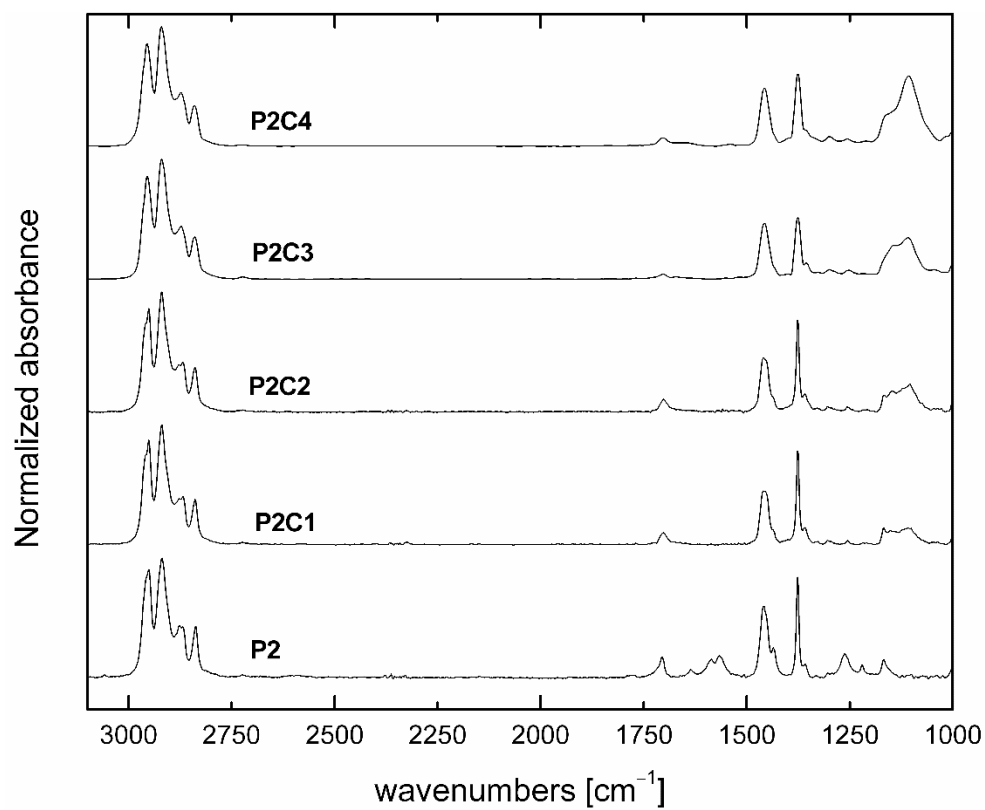


Figure S2 FTIR spectra of the crosslinked polymer **P2**.

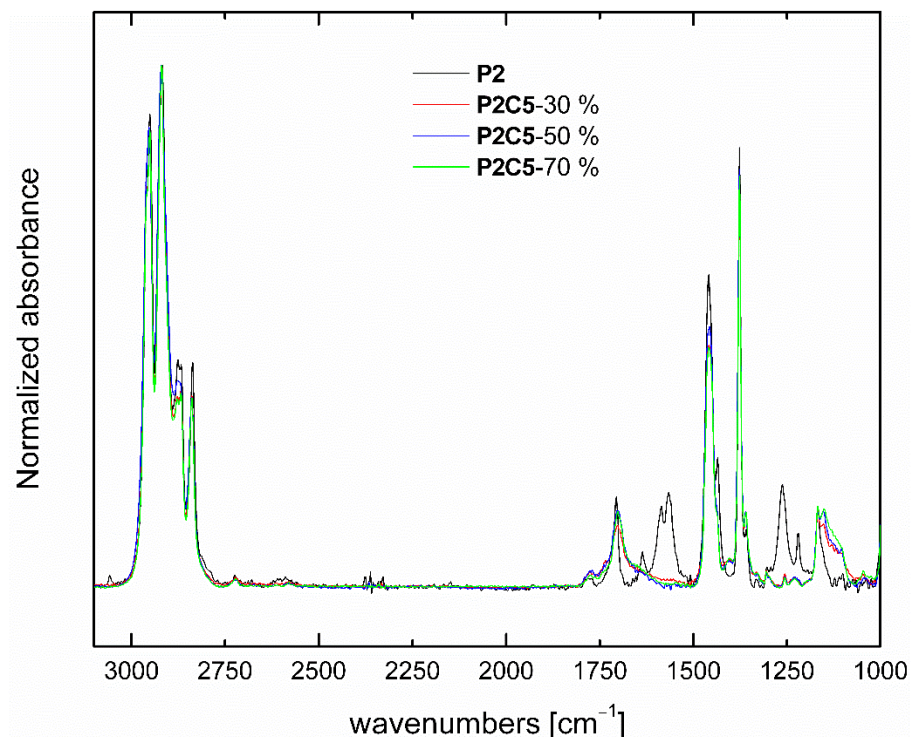


Figure S3 FTIR spectra of the crosslinked polymer **P2** with the crosslinker **C5** in different molar ratio of MA:NH₂.

BET results

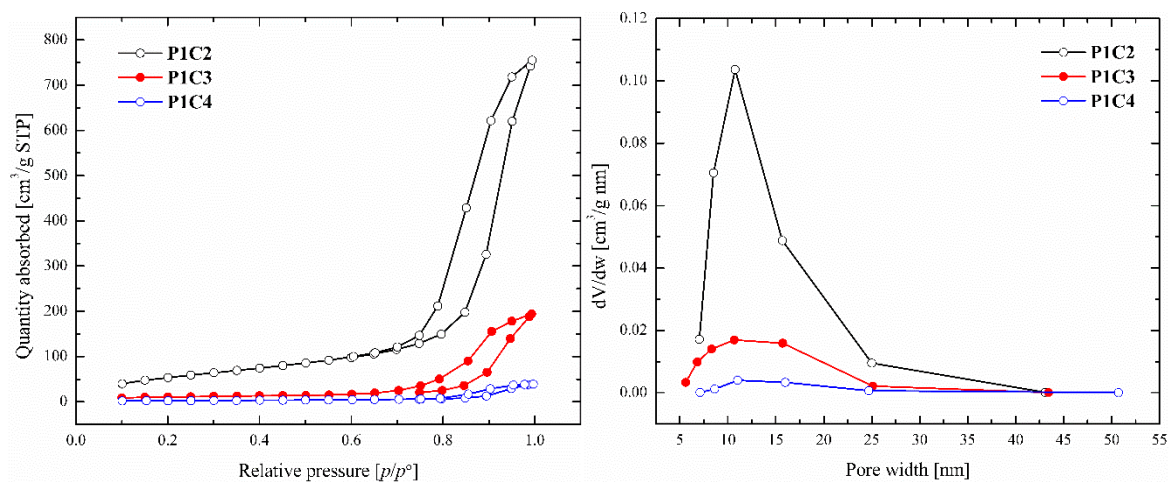


Figure S4 N₂ adsorption-desorption isotherms of aerogels from the polymer **P1** (left) and their pore-size distribution profiles (right).

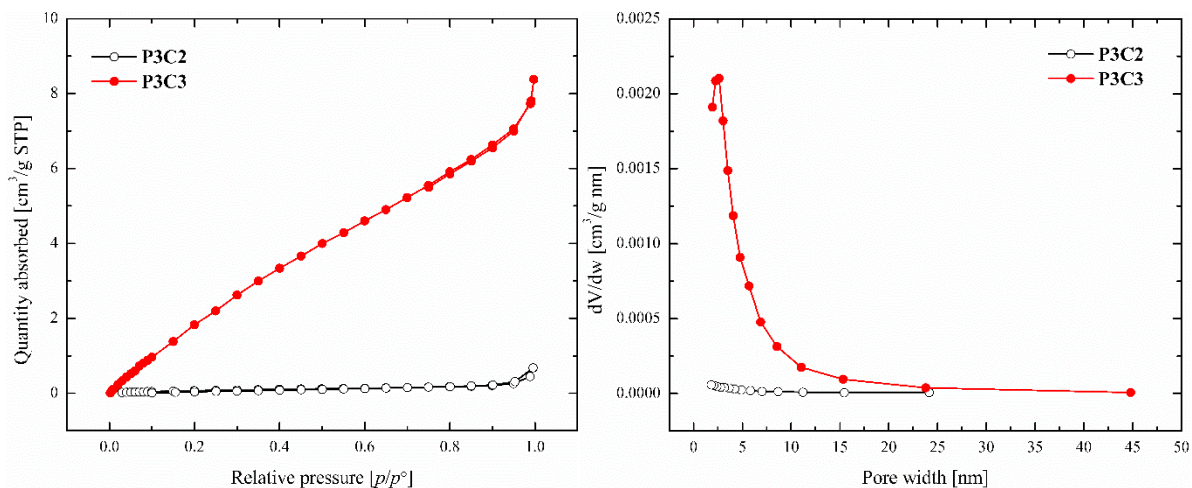


Figure S5 N_2 adsorption-desorption isotherms of aerogels from the polymer **P3** (left) and their pore-size distribution profiles (right).

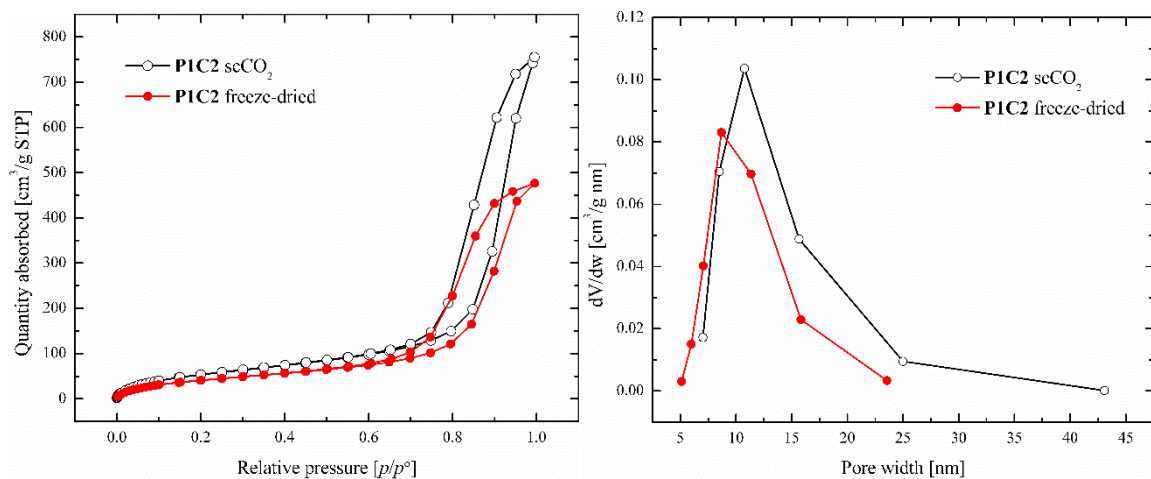


Figure S6 N_2 adsorption-desorption isotherms of **P1C2** aerogels obtained by scCO₂ and freeze-drying (left) and their pore-size distribution profiles (right).

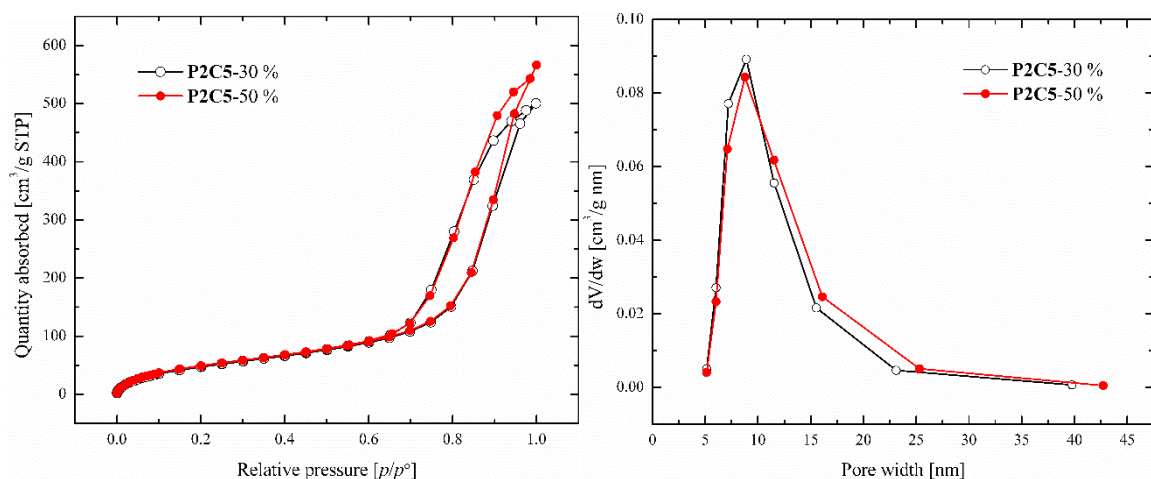


Figure S7 N_2 adsorption-desorption isotherms of **P2C5** aerogels using different molar ratio of MA:NH₂ in polymer synthesis (left) and their pore-size distribution profiles (right).

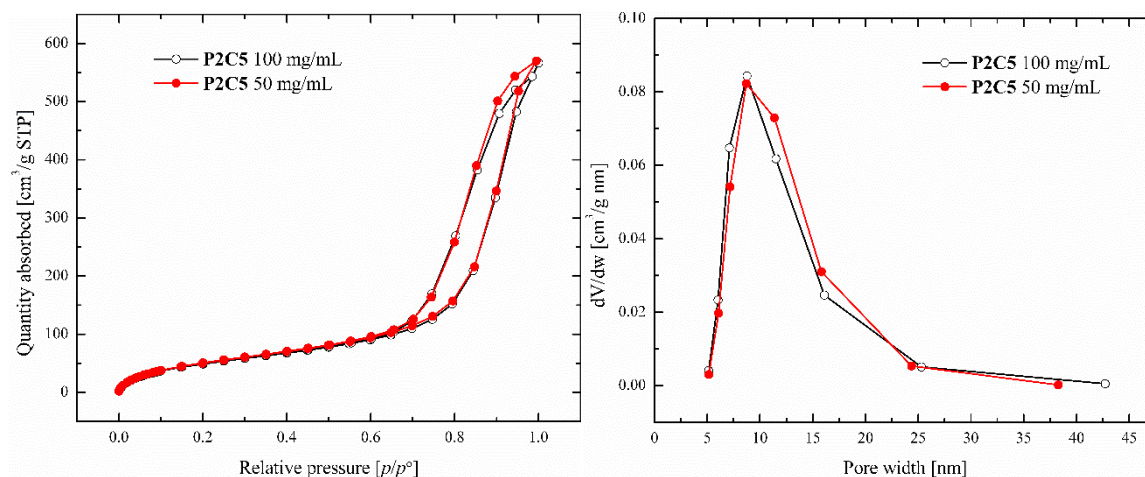


Figure S8 N_2 adsorption-desorption isotherms of **P2C5** aerogels (50% molar ratio of MA: NH_2) using different polymer concentration in gel preparations (left) and their pore-size distribution profiles (right).

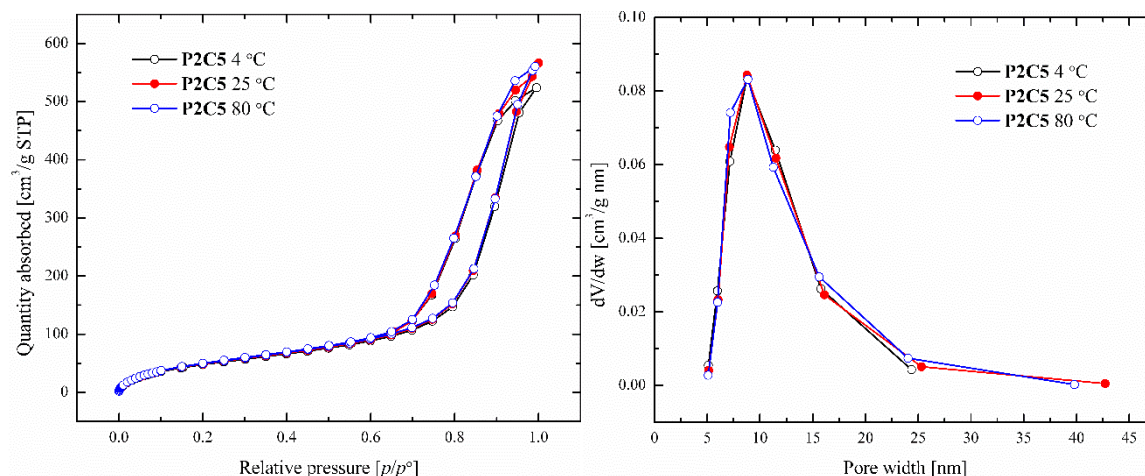


Figure S9 N_2 adsorption-desorption isotherms of **P2C5** aerogels obtained by using different quenching temperature in gel preparations (left) and their pore-size distribution profiles (right).

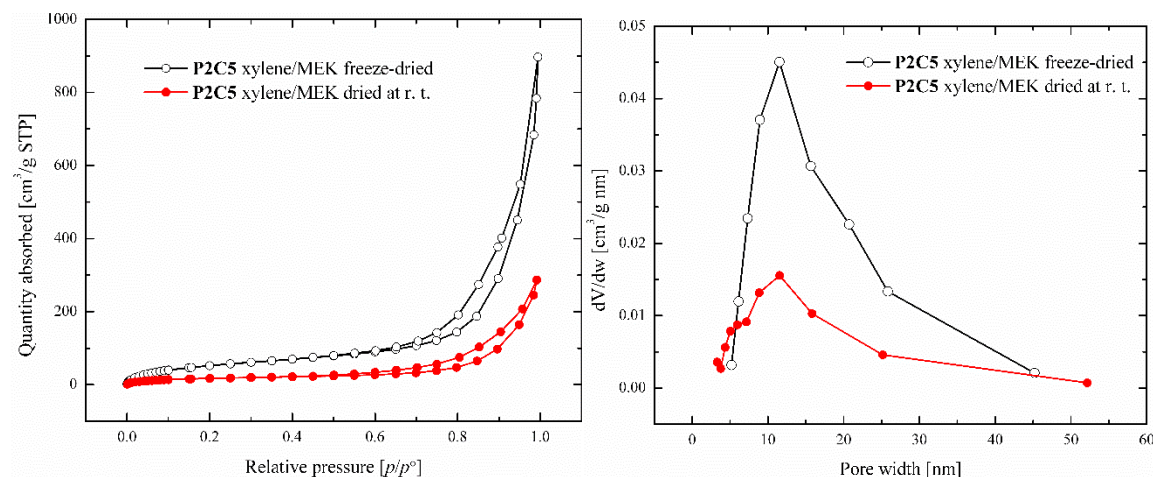


Figure S10 N_2 adsorption-desorption isotherms of **P2C5** aerogels obtained by freeze-drying and drying at r. t. of xylene/MEK gels (left) and their pore-size distribution profiles (right).

SEM micrographs

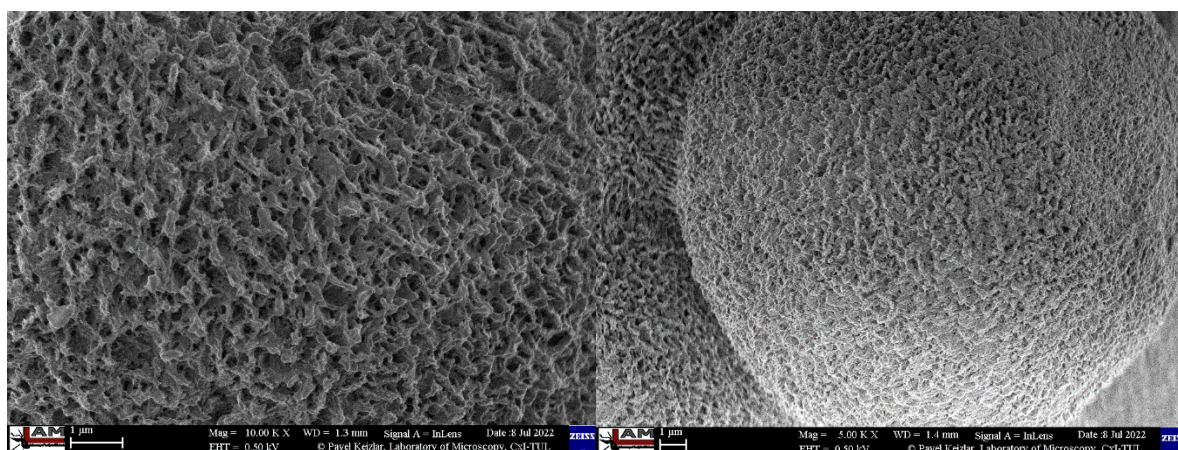


Figure S11 SEM micrographs of **P1C3** aerogel.

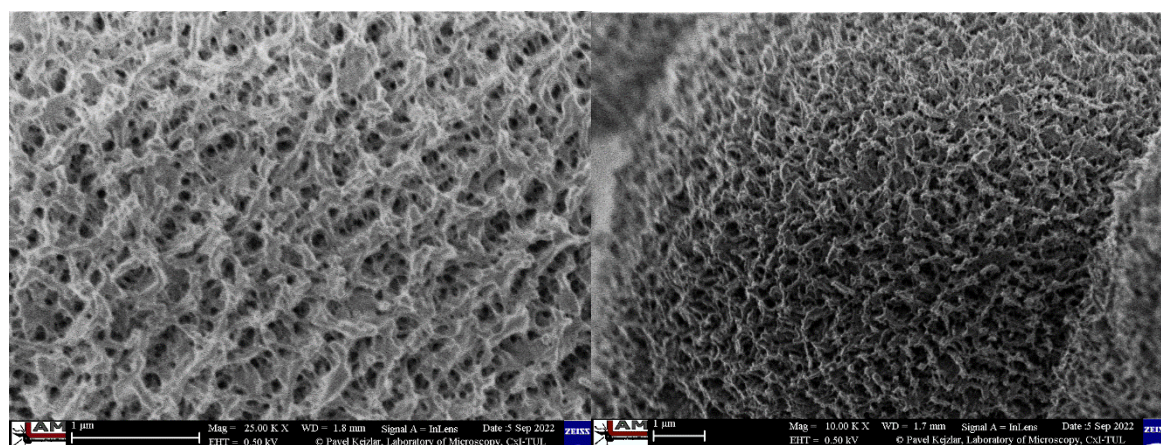


Figure S12 SEM micrographs of **P1C4** aerogel.

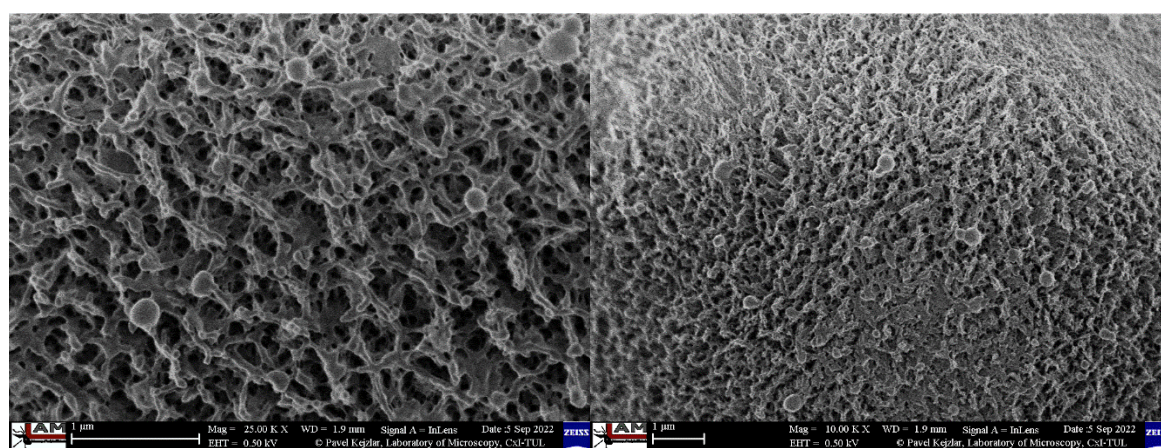


Figure S13 SEM micrographs of **P2C1** aerogel.

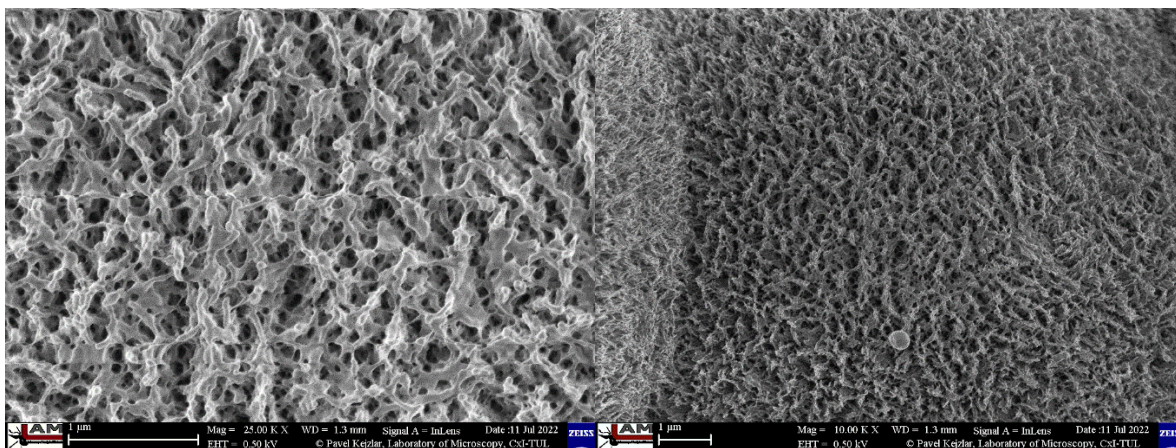


Figure S14 SEM micrographs of **P2C3** aerogel.

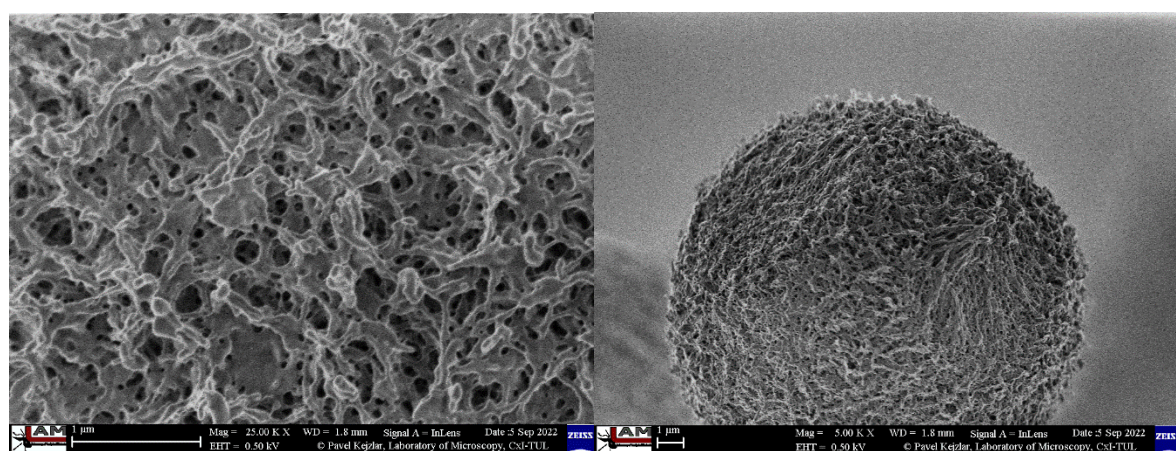


Figure S15 SEM micrographs of **P2C4** aerogel.

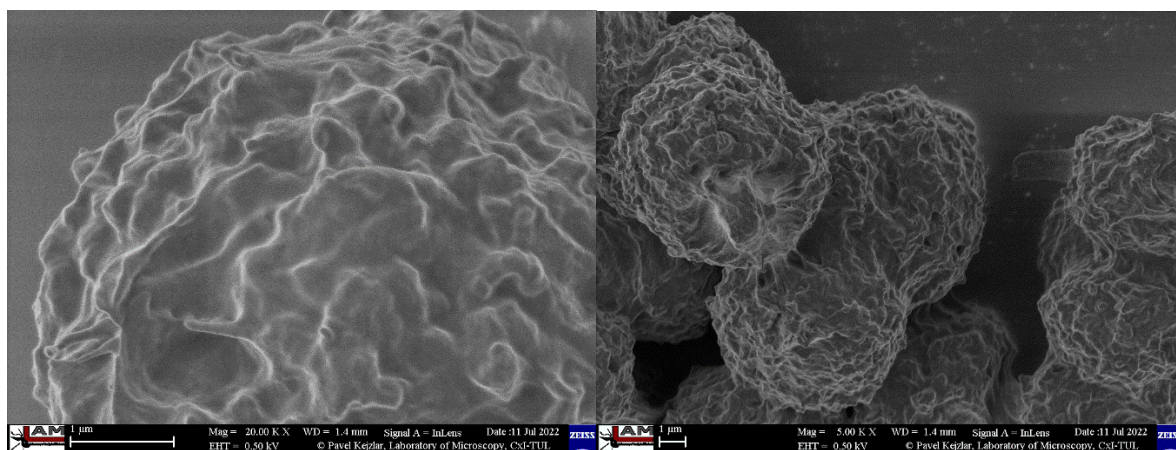


Figure S16 SEM micrographs of **P3C3** aerogel.

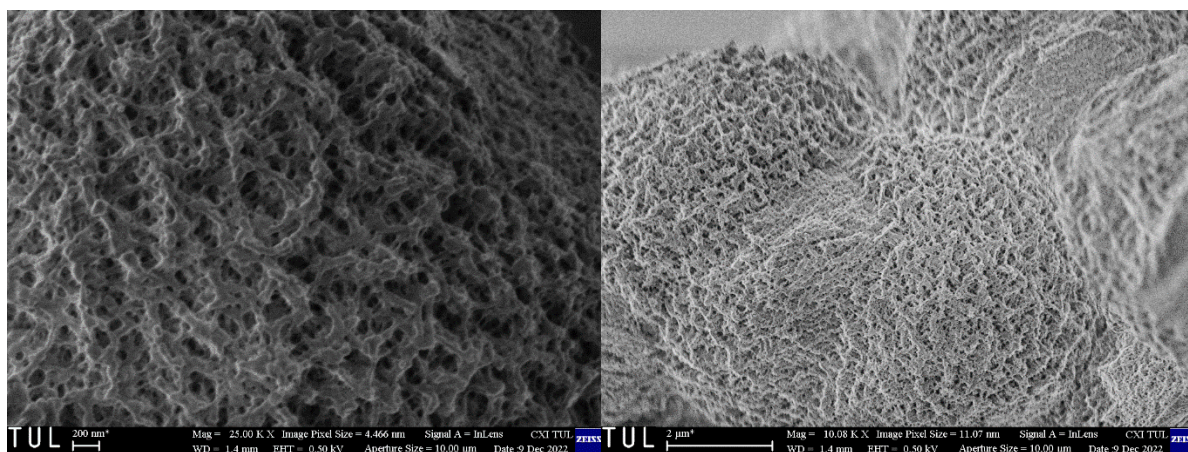


Figure S17 SEM micrographs of **P2C5** aerogel, 30% molar ratio of MA:NH₂, quenching temperature 25 °C.

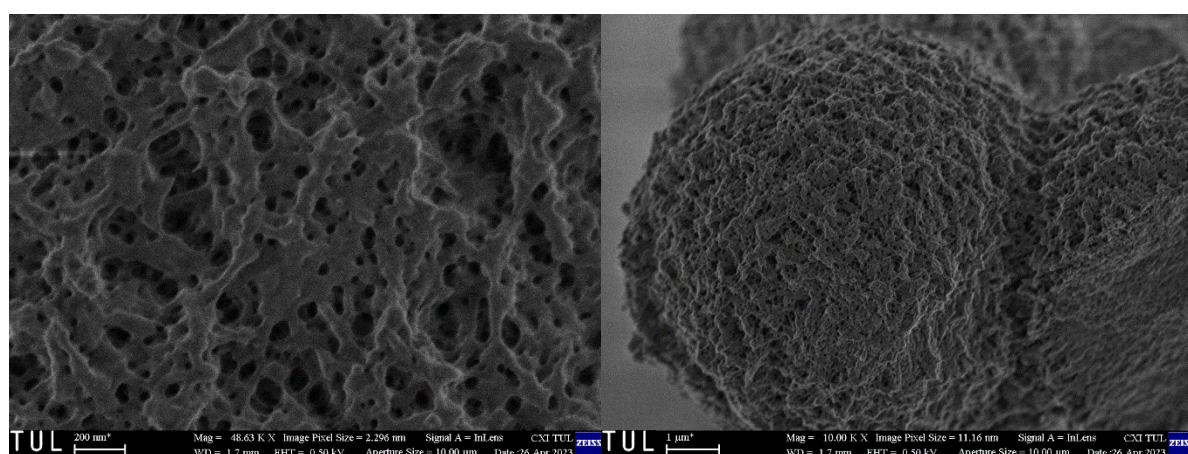


Figure S18 SEM micrographs of **P2C5** aerogel, 50% molar ration of MA:NH₂, quenching temperature 4 °C.

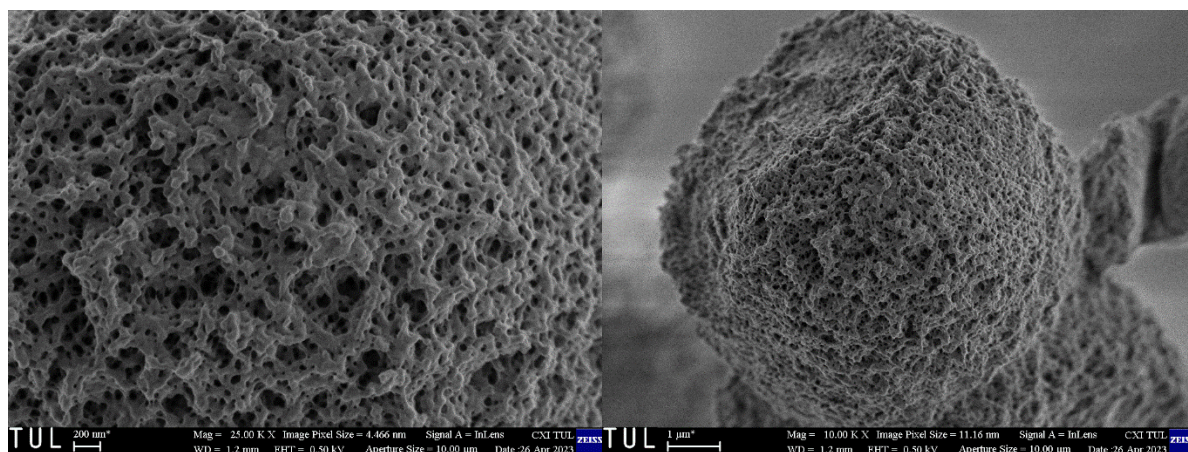


Figure S19 SEM micrographs of **P2C5** aerogel, 50% molar ration of MA:NH₂, quenching temperature 80 °C.

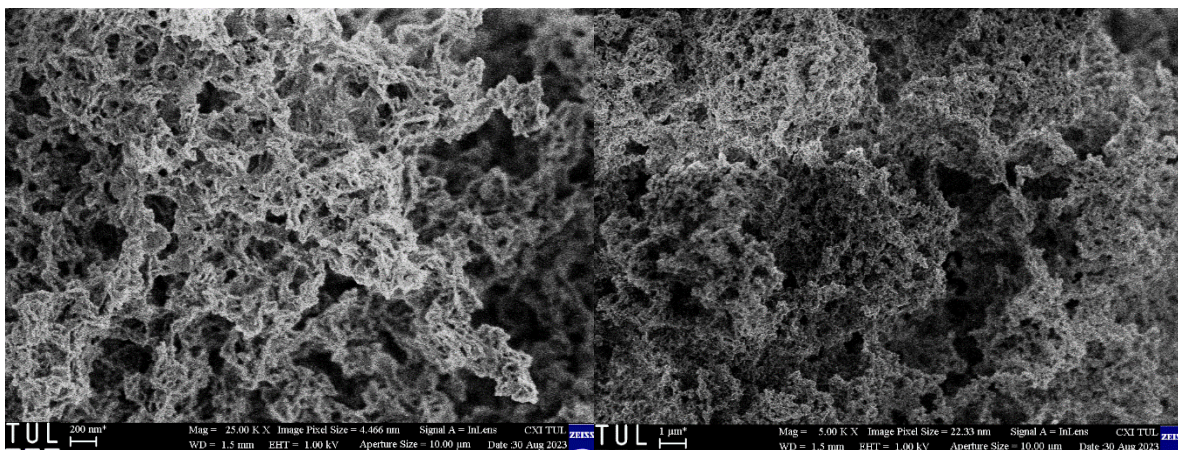


Figure S20 SEM micrographs of **P2C5** aerogel, 50% molar ration of MA:NH₂, using xylene/MEK (4/6, v/v) in gel preparation, dried at r. t.

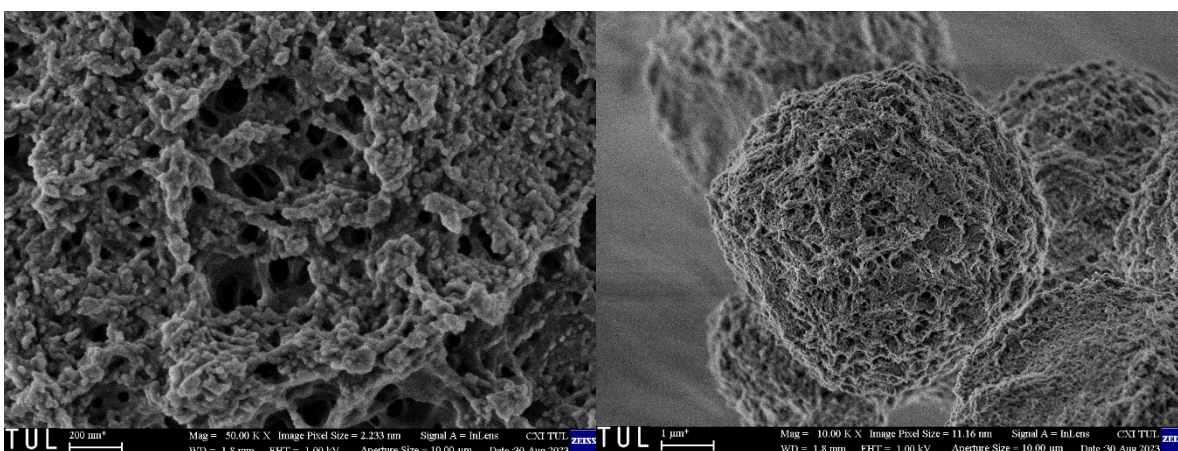


Figure S21 SEM micrographs of **P2C5** aerogel, 50% molar ration of MA:NH₂, using concentration of 50 mg/mL in gel preparation.