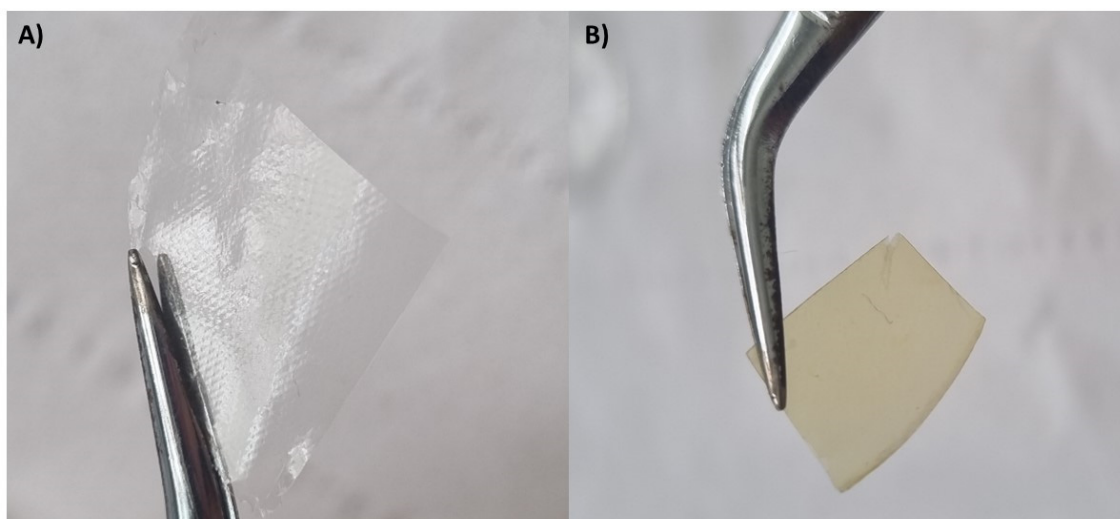


Supplementary Information



**Figure S1. Digital images of CNC film A. Before modification and B. After grafting the polymer
(CNC-g-PTMAEMA 1)**

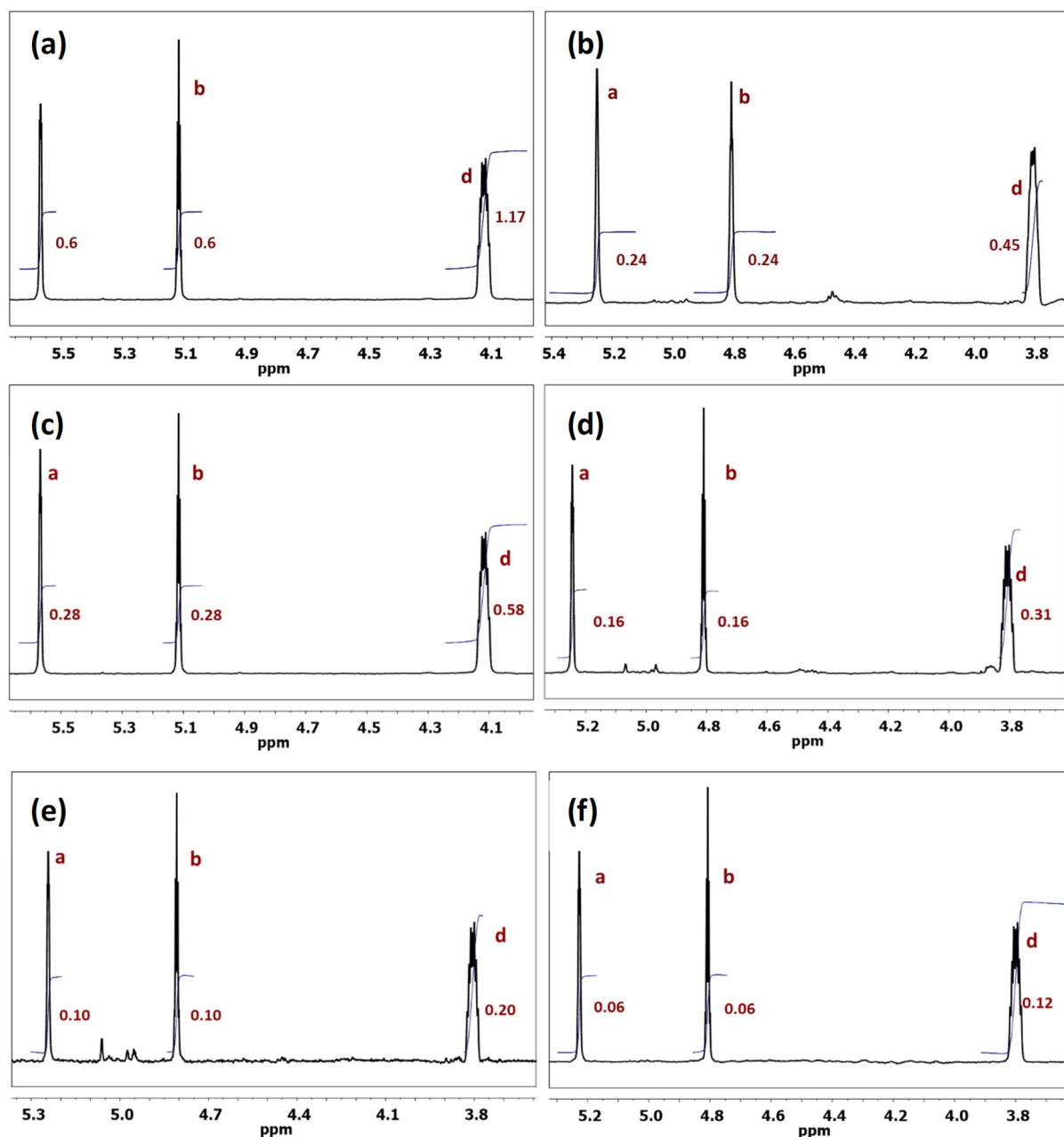


Figure S2. ^1H NMR signals of vinyl protons of CNC-g-PTMAEMA 1 before (a) and after (b), CNC-g-PTMAEMA 2 before (c) and after (d), and CNC-g-PTMAEMA 3 before (e) and after (f) the reaction.

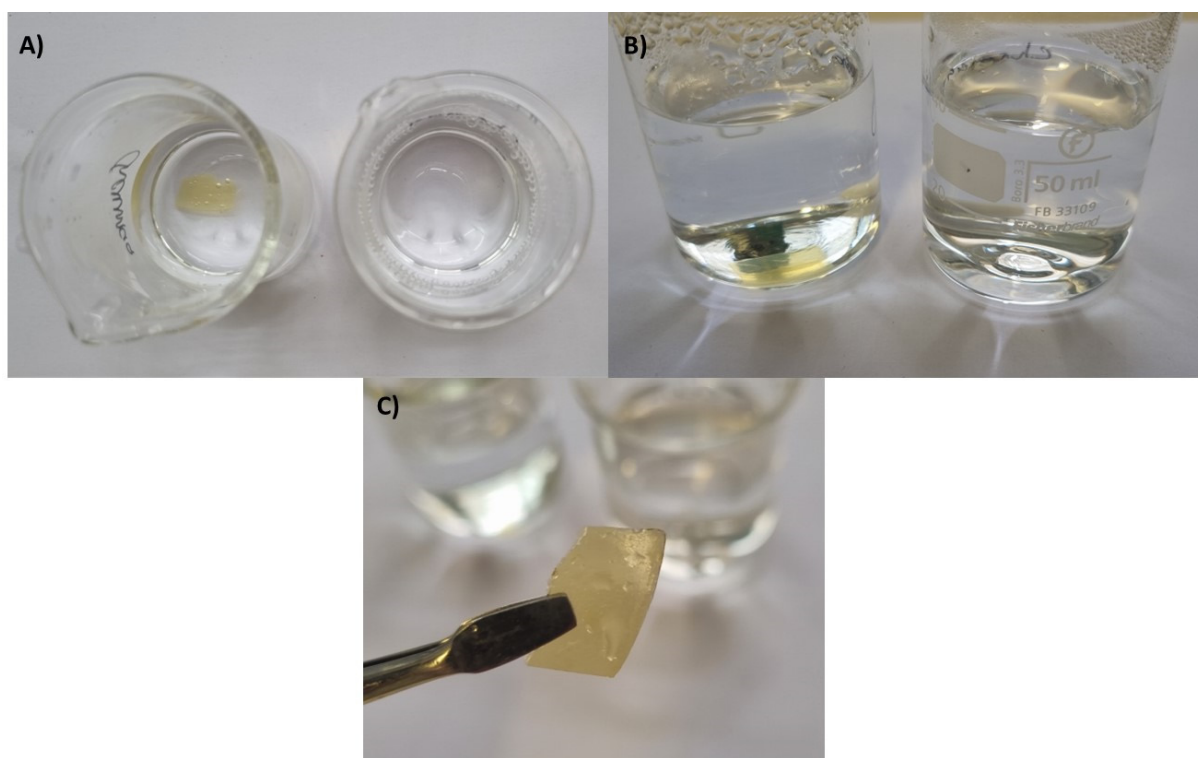


Figure S3. A. and B. Digital images of CNC-g-PTMAEMA 1 film in water (left) and dispersed CNC film. C. CNC-g-PTMAEMA 1 film after several generation tests using sonication and methanol.