

Supporting information

- Picture of gels
- SEM image of hydrogel of TPPBT
- IR Spectra
- Job's Plot
- SEM, TEM, EDX images
- Rheological Studies
- Probable Structures

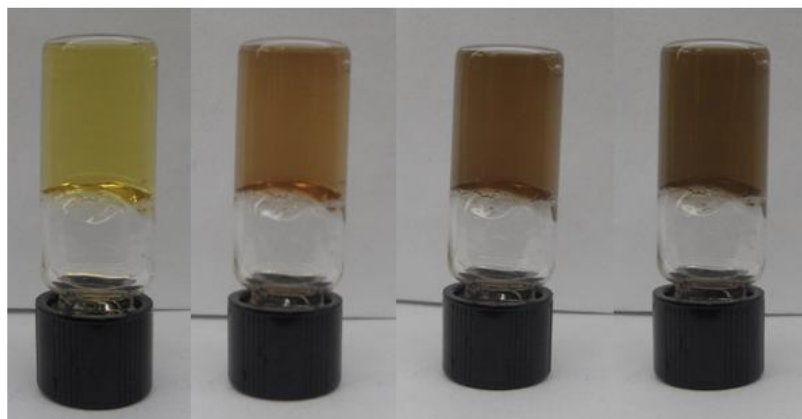


Figure S1. Silver nitrate metallogels of TPPBT with 2 equiv. metal in H₂O: DMF 7:3 (v/v) medium after (from left to right) 0, 1, 2 and 4 hours of gel formation in light.

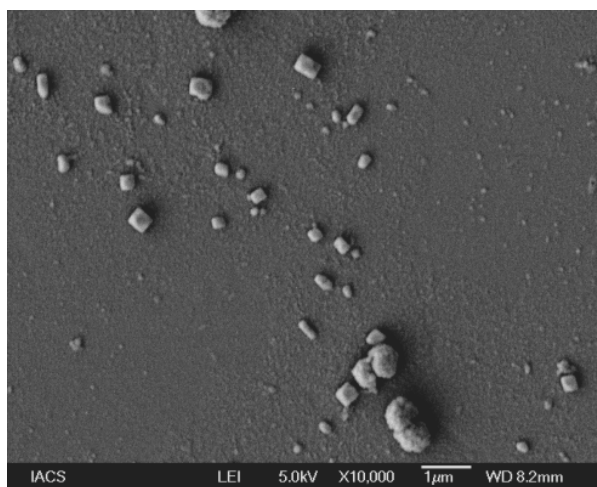
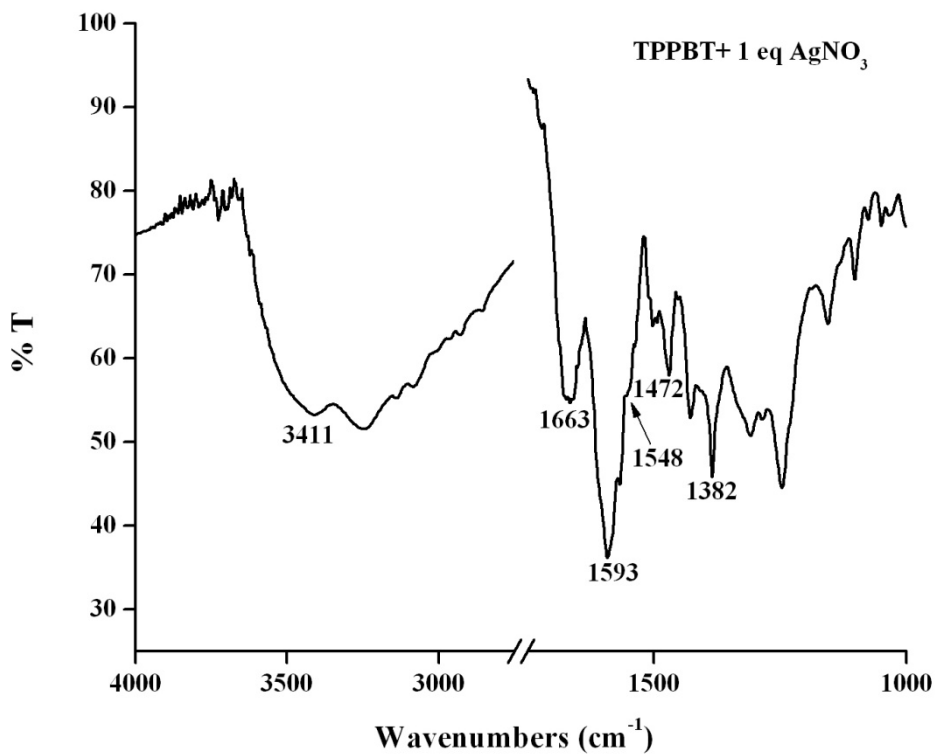
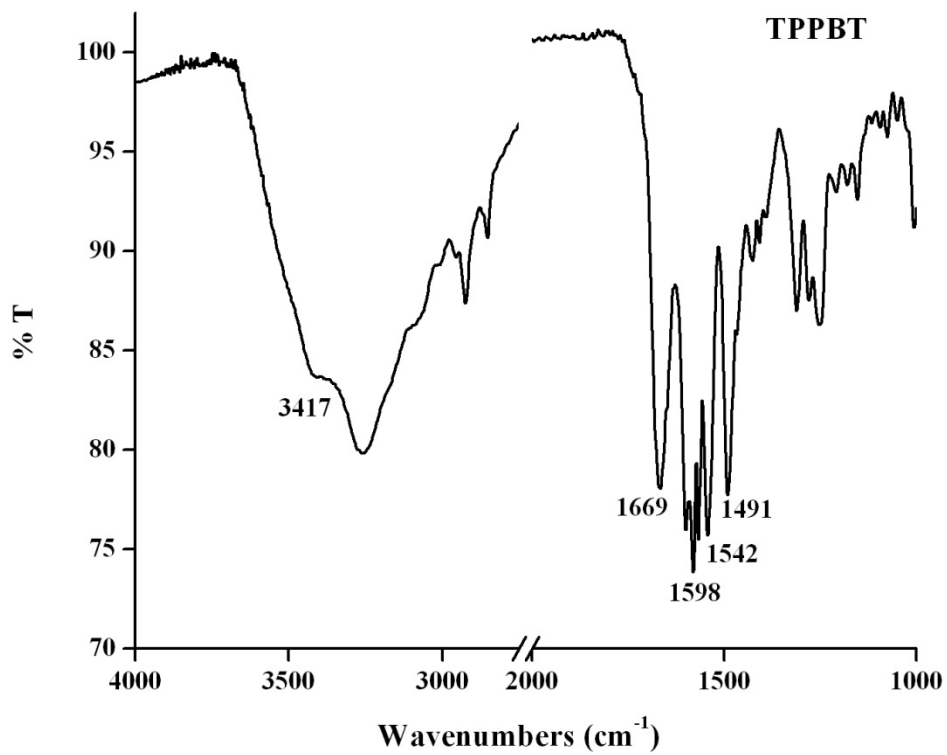


Figure S2. SEM image of hydrogel of TPPBT prepared from 7:3 water/DMF.



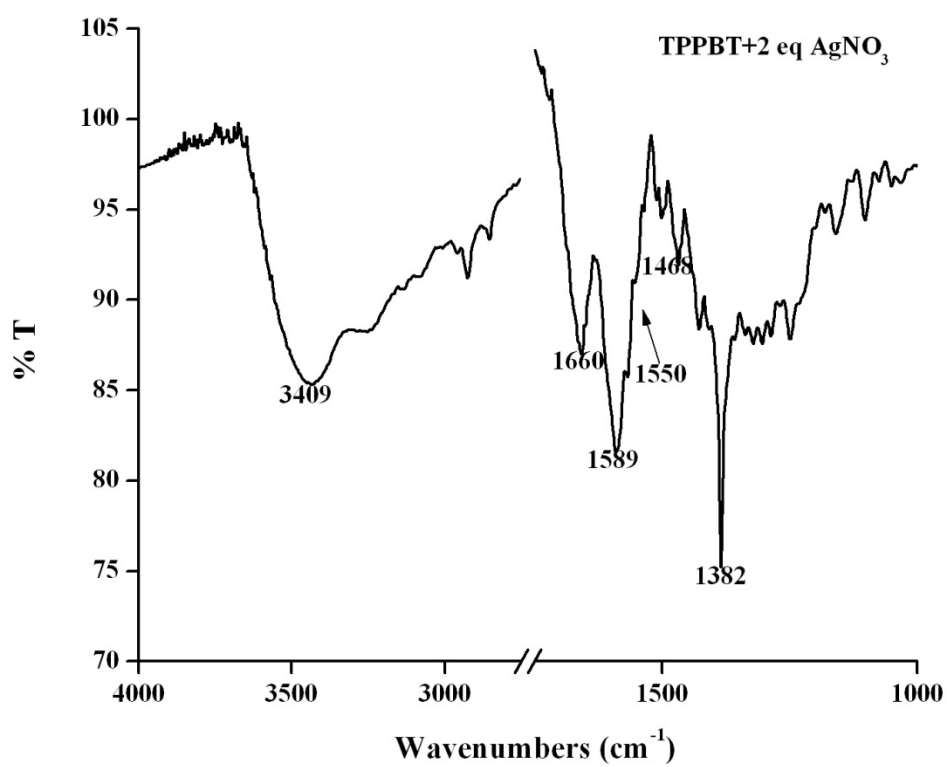
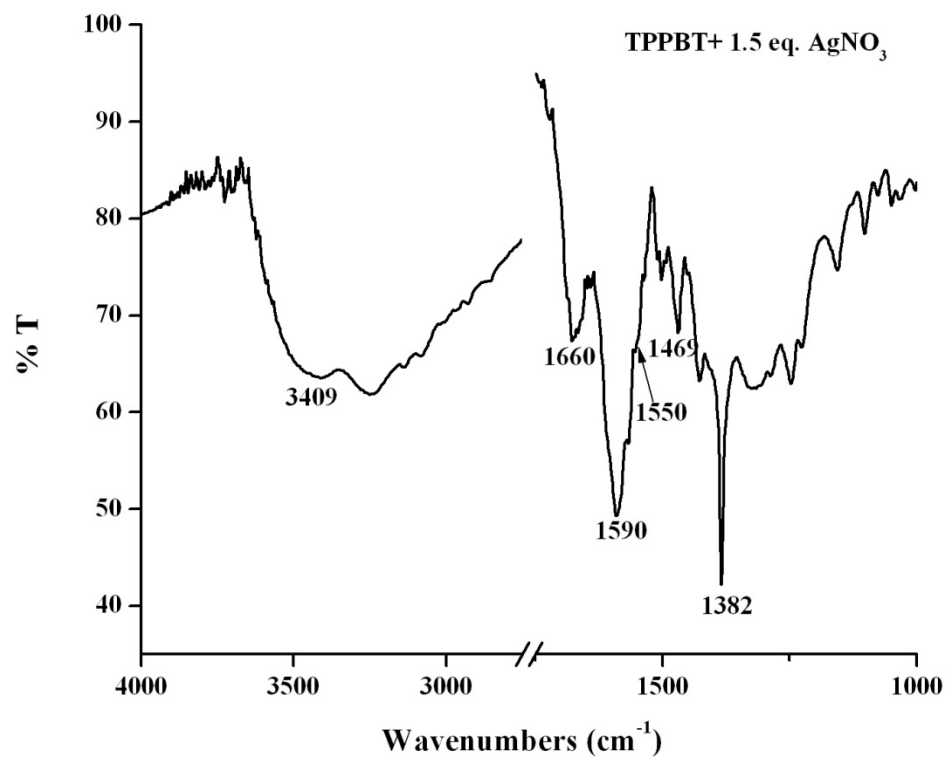


Figure S3. IR spectra of (from top to bottom) TPPBT and its xerogels prepared from silver nitrate under varying concentrations.

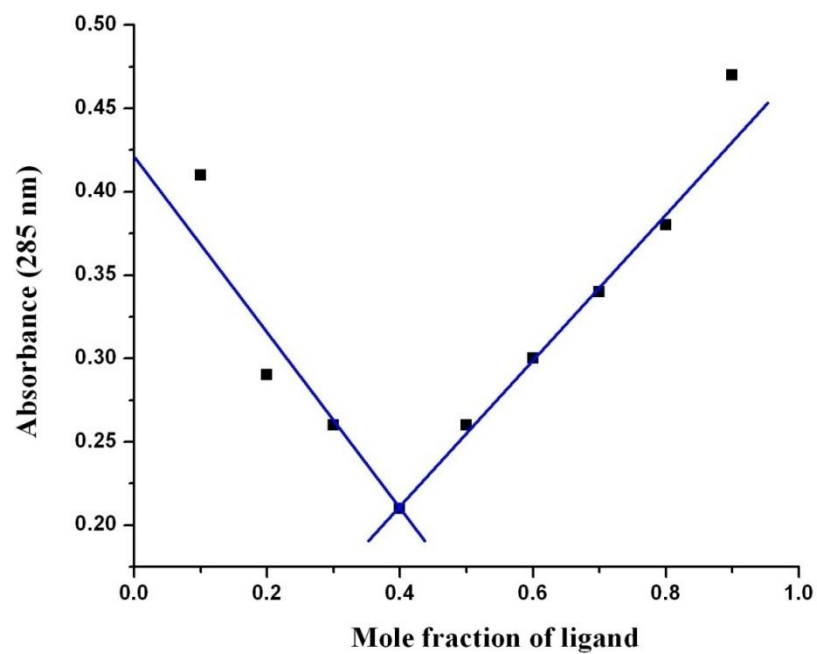


Figure S4. Job's plot analysis of TPPBT with silver nitrate in DMF/H₂O (1:1) medium

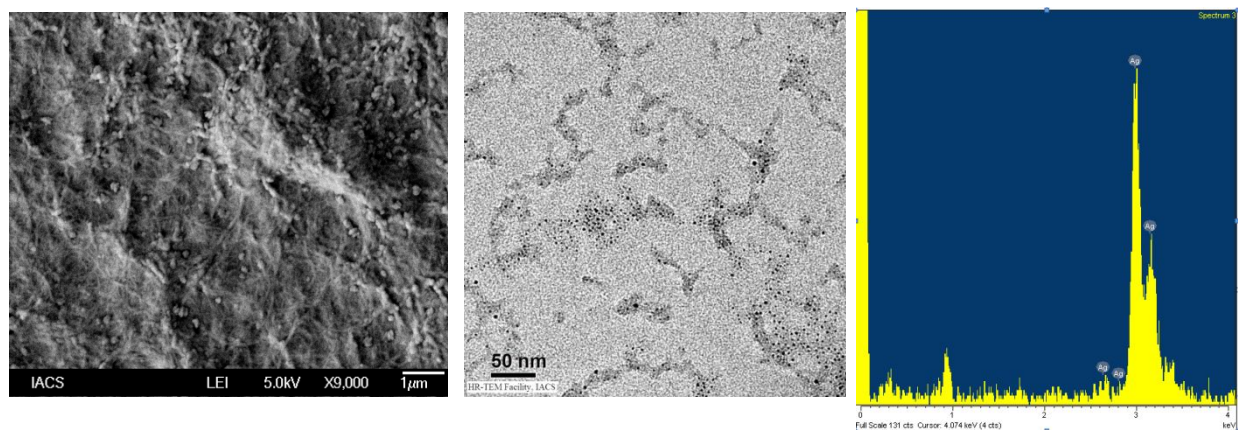


Figure S5. a) SEM image of 1.5 equiv. silver nitrate gel, b) TEM image of 1.5 equiv. silver nitrate gel, c) EDX analysis of the nanoparticles of 2 equiv. silver nitrate gel confirming the presence of silver.

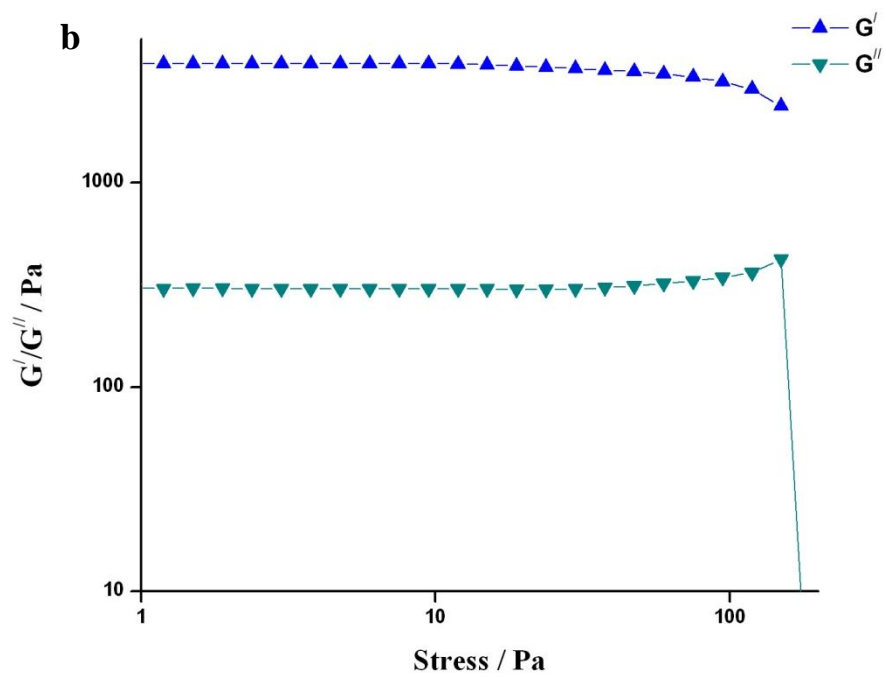
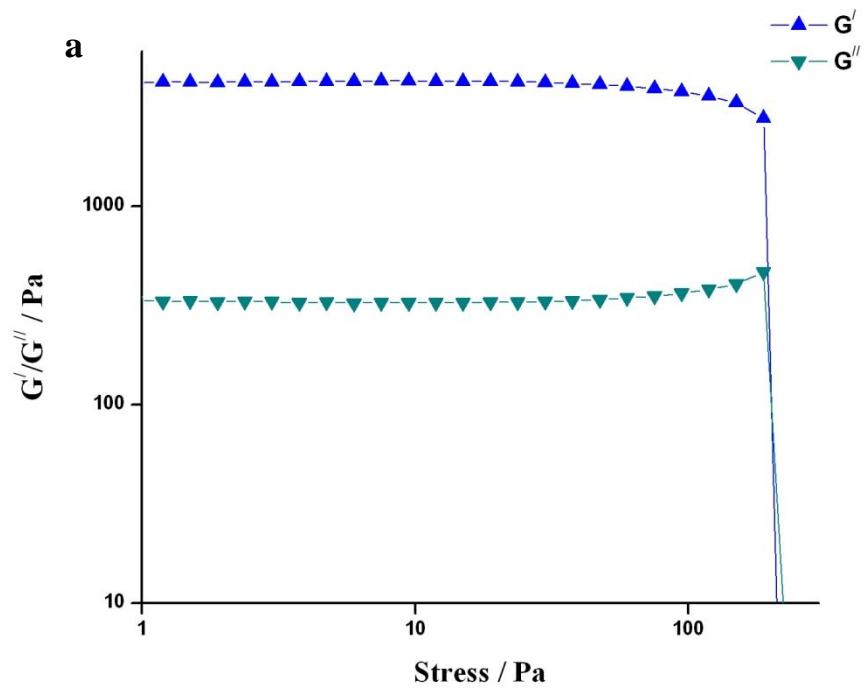


Figure S6. Plot of elastic modulus (G' , blue) and viscous modulus (G'' , green) of 1 wt % silver gels prepared with 2 equiv. of a) silver tetrafluoroborate and b) silver triflate after nanoparticle formation.

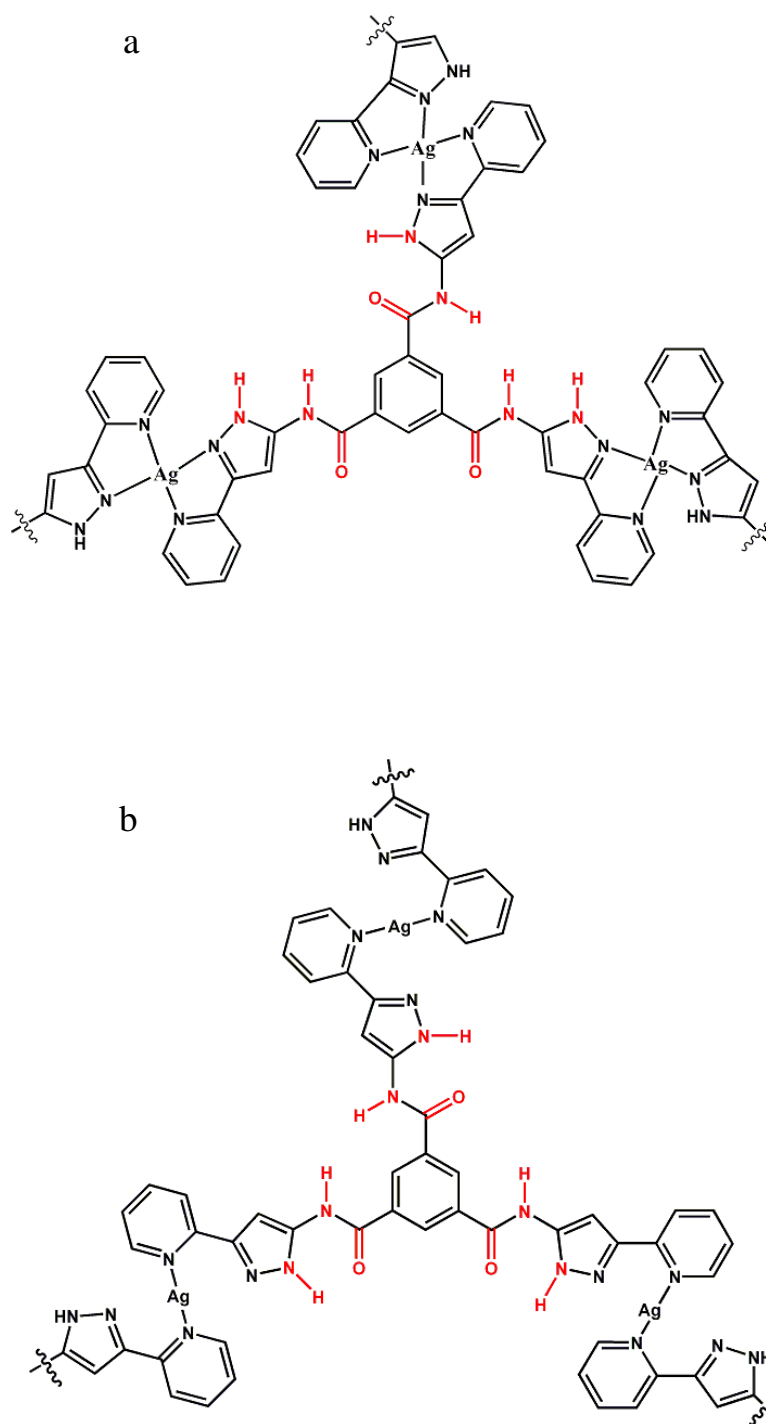


Figure S7. Schematic representation of two probable local structures showing the coordination sphere around silver coordinating (a) pseudotetrahedrally and (b) linearly. Please note the functional groups that are responsible for gel formation via hydrogen bond are highlighted in red.