Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting information

Highly conducting 1-D polypyrrole prepared in the presence of safranin

Islam M. Minisy[a,b], Udit Acharya[a,c], Libor Kobera[a], Miroslava Trchová[a,d], Christoph Unterweger[e], Stefan Breitenbach[e], Jiří Brus[a], Jiří Pfleger[a], Jaroslav Stejskal[a], Patrycja Bober[a,*]

[a] *Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, 162 06 Prague 6, Czech Republic*

[b] *Charles University, Faculty of Science, 128 43 Prague 2, Czech Republic*

[c] *Charles University, Faculty of Mathematics and Physics, 121 16 Prague 2, Czech Republic*

[d] *University of Chemistry and Technology Prague, 166 28 Prague 6, Czech Republic*

[e] *Wood K Plus – Kompetenzzentrum Holz GmbH, 4040 Linz, Austria*

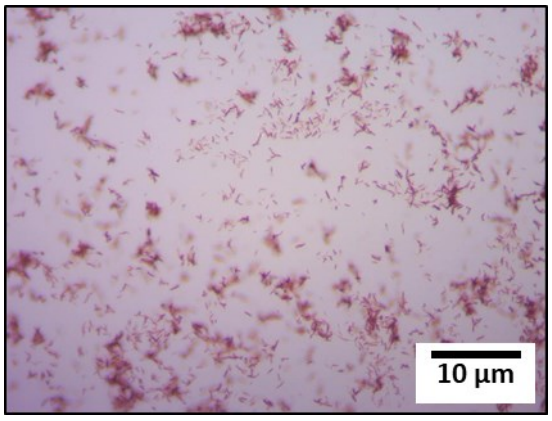

Fig. S1. Optical micrograph of fibrillary aggregates of safranin when mixed with iron(III) chloride solution.

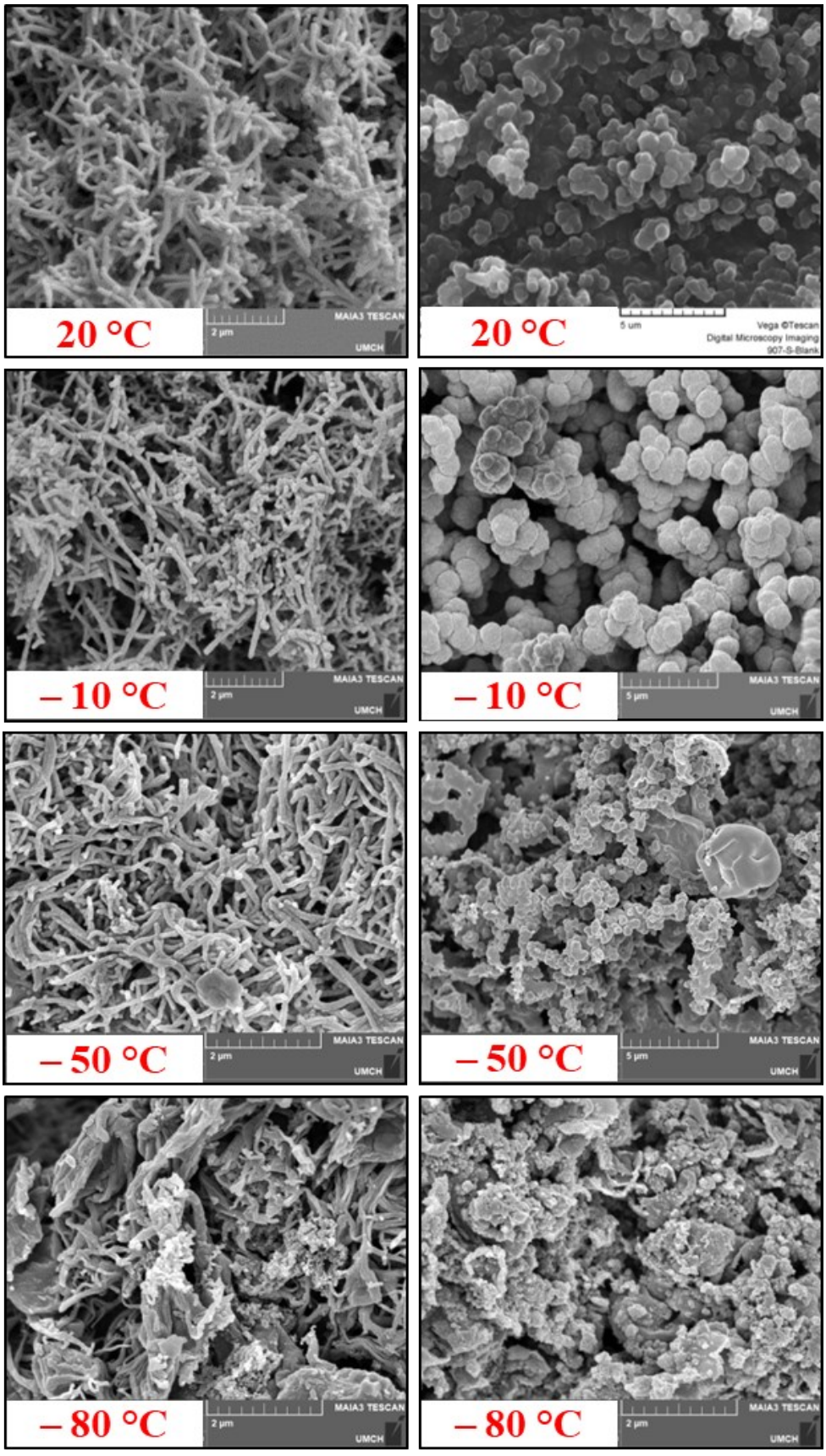

Fig. S2. SEM micrographs of polypyrrole prepared at different temperatures in the presence of safranin (left), and globular dye-free polypyrrole (right).

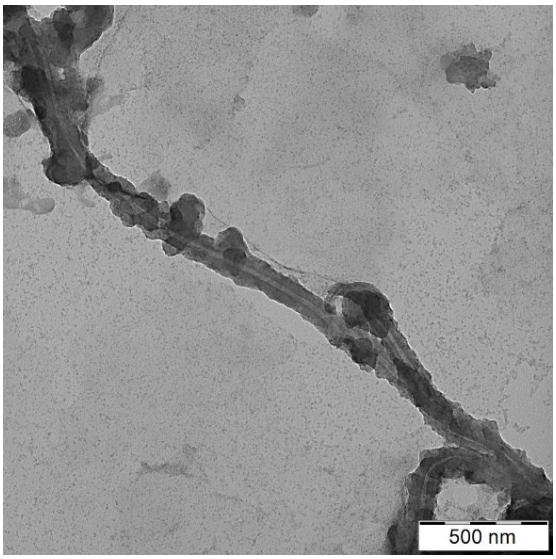

Fig. S3. TEM micrograph of polypyrrole prepared in the presence of safranin at −80 ºC.

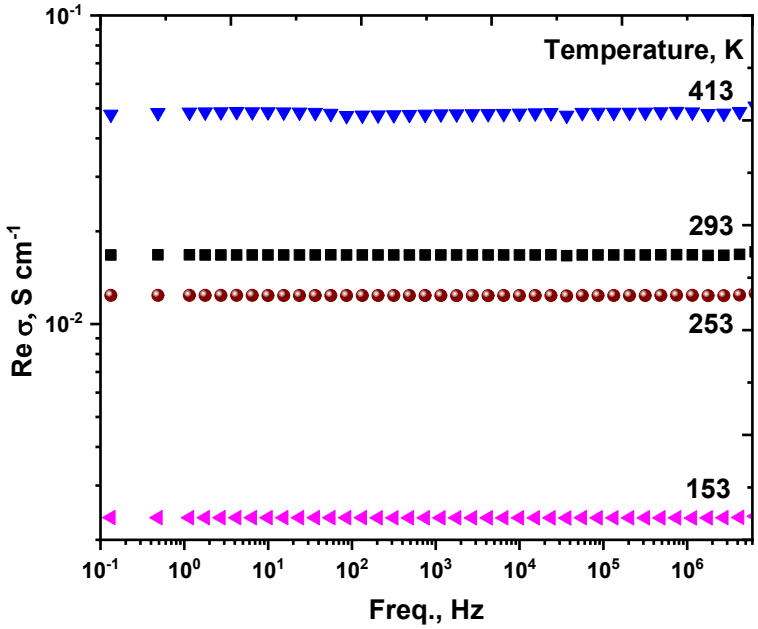

Fig. S4. Frequency dependence of conductivity at different temperatures of 1-D polypyrrole prepared in the presence of safranin at −24 °C.

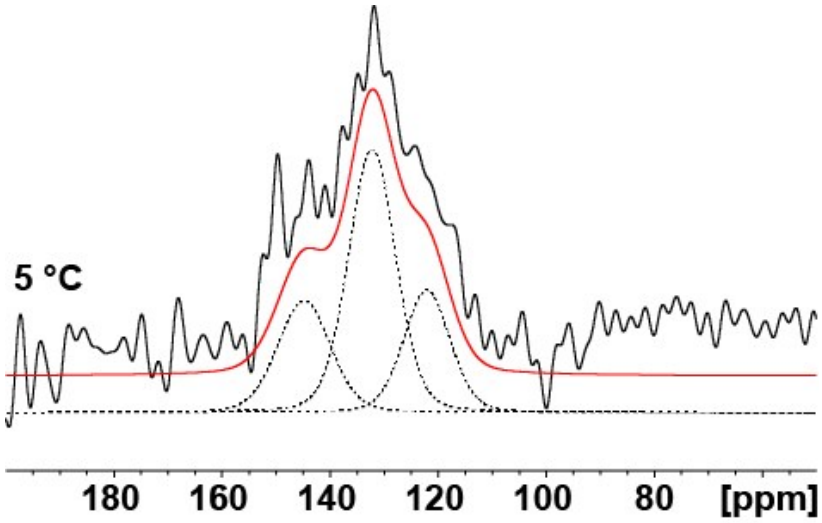

Fig. S5. Experimental ^{15}N CP/MAS NMR spectrum (black solid line), simulations of the individual nitrogen atoms (dashed lines) and their sum (red solid line) of prepared and deprotonated polypyrrole sample.

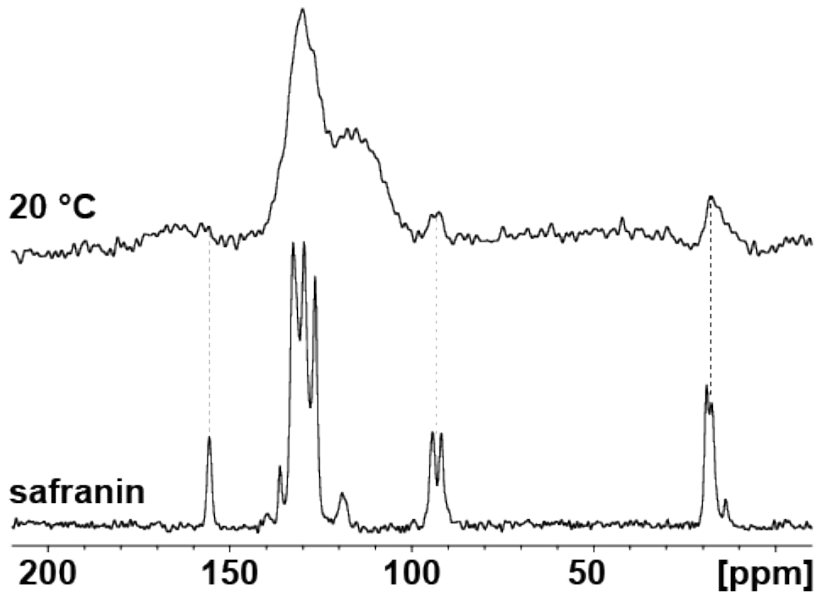

Fig. S6. The comparison of experimental ^{13}C CP/MAS NMR spectra of safranin with polypyrrole prepared in the presence of safranin at 20 °C.