

## Electronic Supporting information for

### Closer to Polydopamine structure: new insights from a combined $^{13}\text{C}/^1\text{H}/^2\text{H}$ solid-state NMR study on deuterated samples.

Monica Cîrcu and Claudiu Filip\*

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania.

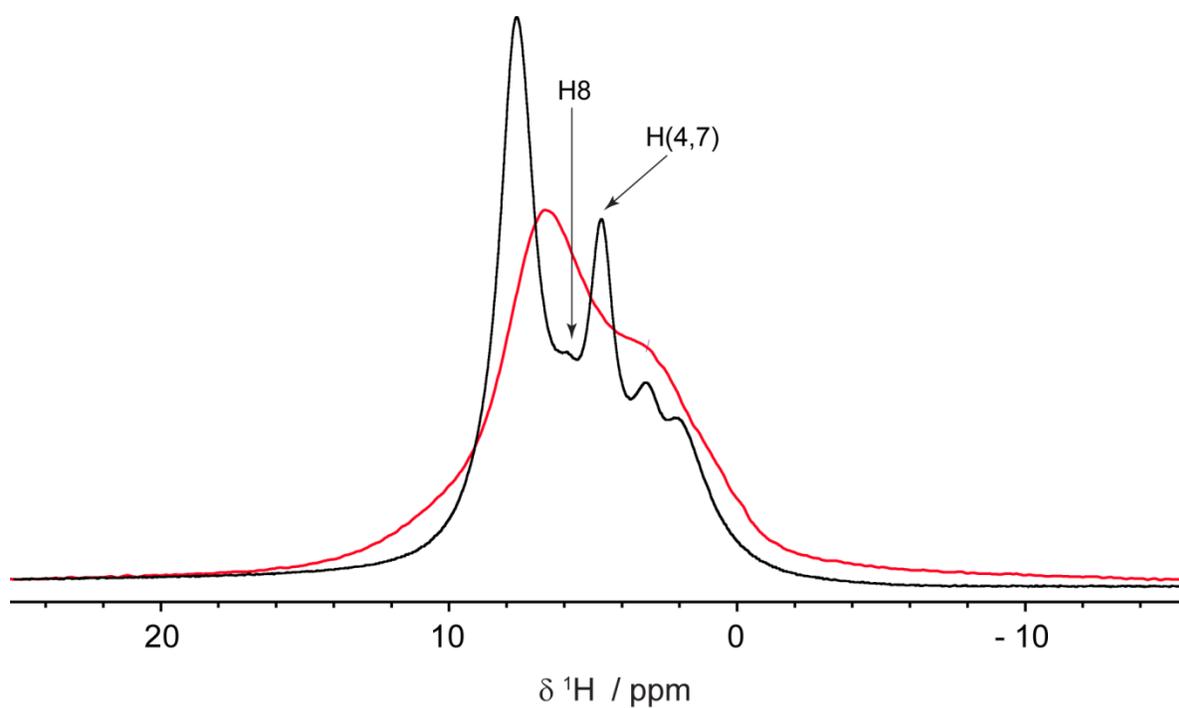


Figure S1: comparison between the  $^1\text{H}$  ss-NMR spectra of dopamine (black line) and the non-deuterated PDA (red line) acquired 60 kHz sample spinning frequency. The arrows mark the aromatic protons in the dopamine spectrum.

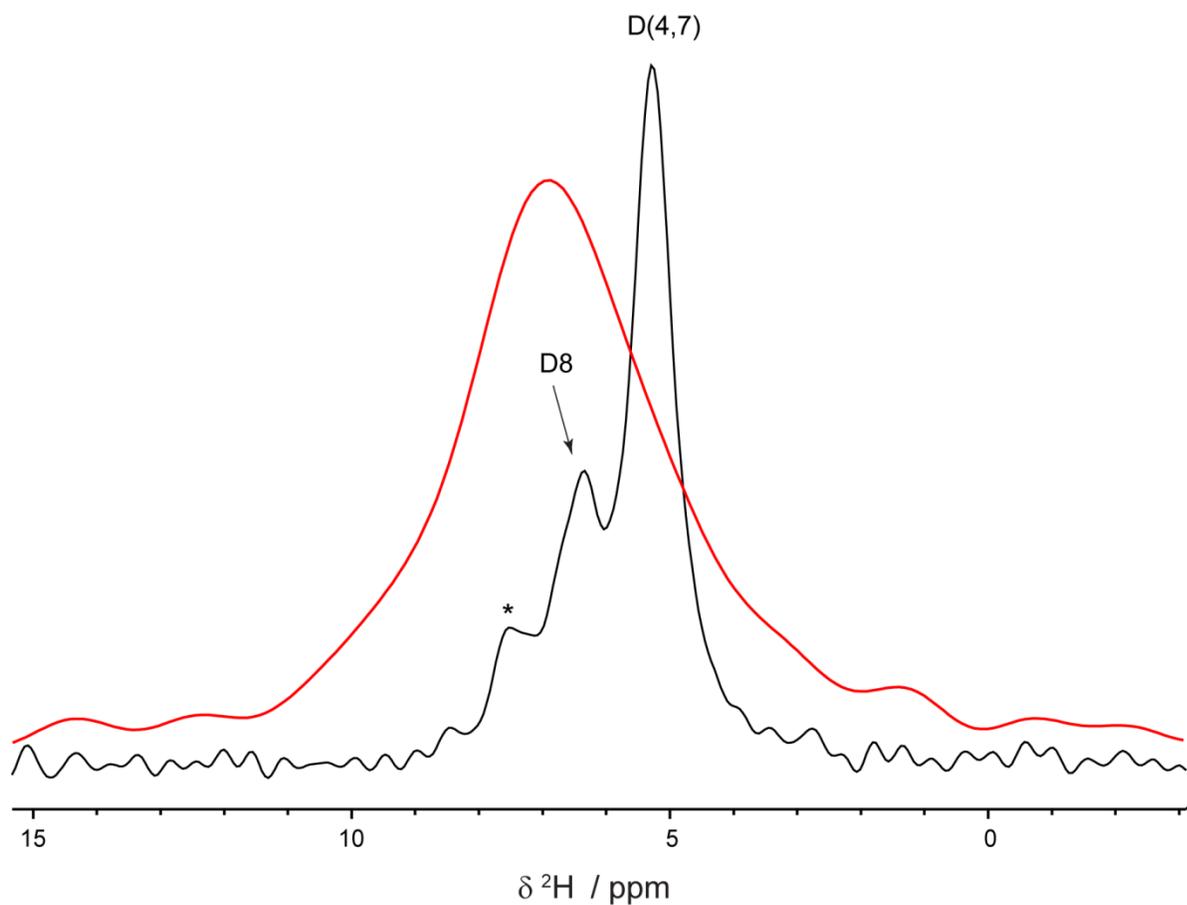


Figure S2: comparison between central lines in the  $^2\text{H}$  ss-NMR spectra of the ring deuterated dopamine (black line) and the PDA-d1 sample (red line) acquired by the solid-echo pulse sequence at 10 kHz sample spinning frequency. The arrows mark the aromatic deuterons in the dopamine spectrum, whereas the asterisk indicate the NMR line ( $\sim 7.5$  ppm) of residual  $-\text{ND}_3^+$  groups, which remain deuterated also after intensive  $\text{H}_2\text{O}$  washing of the sample.

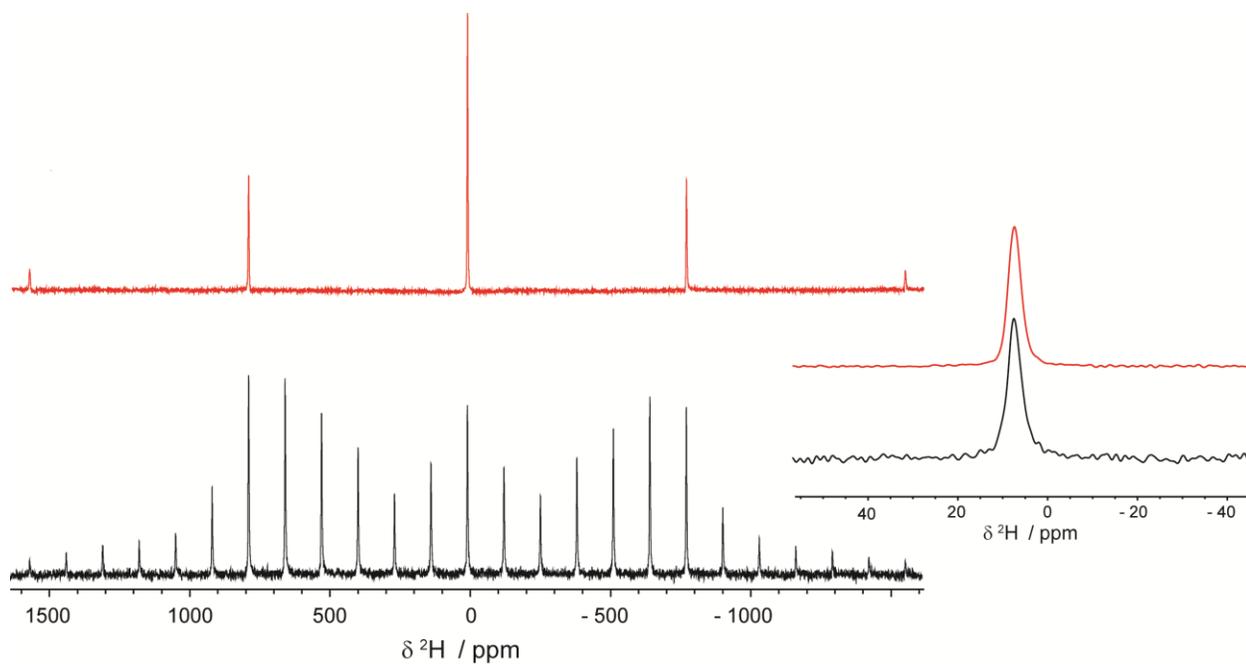


Figure S3: comparison between the  $^2\text{H}$  ss-NMR spectra of the PDA-d1 polydopamine sample acquired by the solid-echo pulse sequence at 10 kHz (black line) and 60 kHz sample spinning frequency (red line). The inset is a zoom of the spectral window around the central line, which shows the negligible effect of sample spinning upon the  $^2\text{H}$  ss-NMR linewidth.