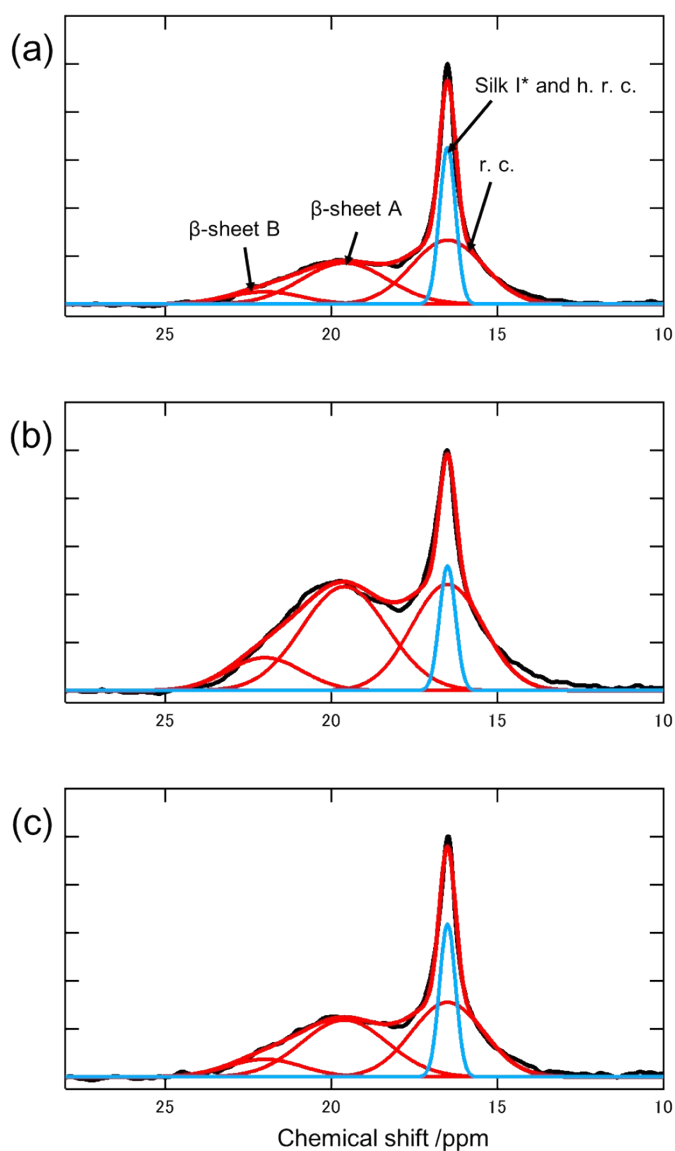
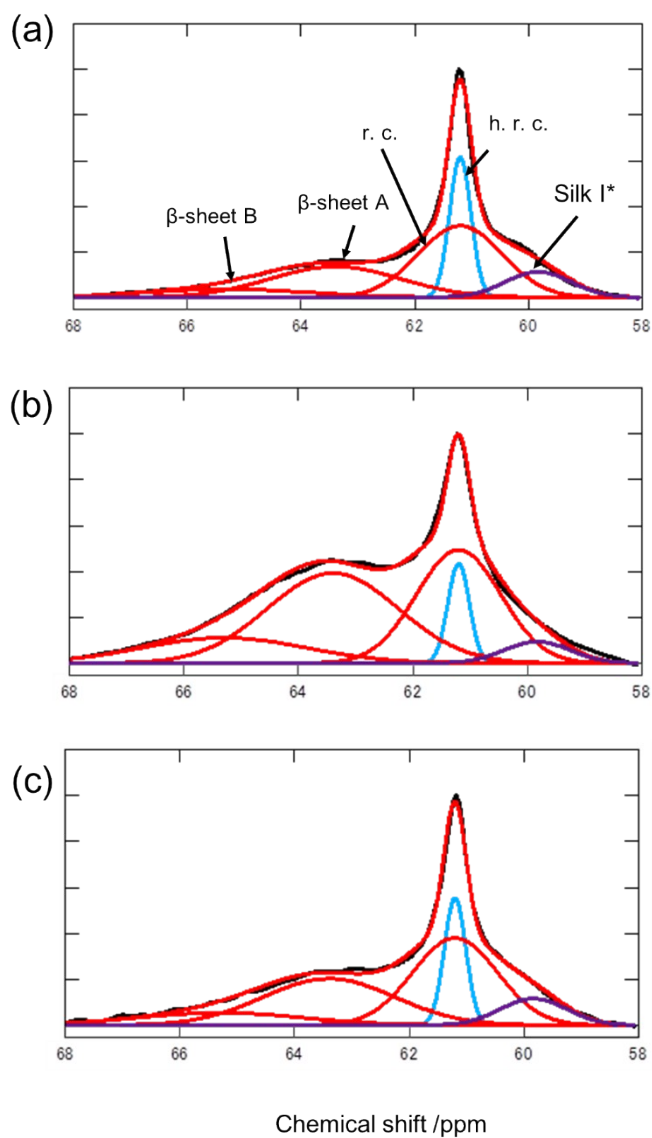


## Electronic Supplementary Information



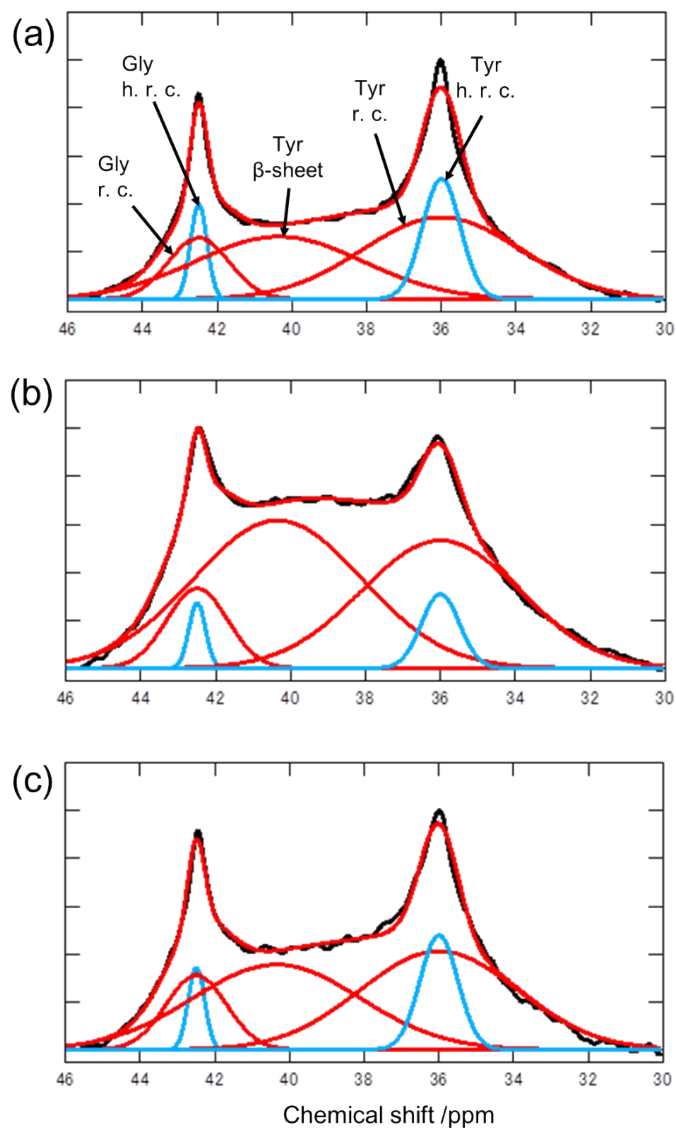
S-1

Observed and deconvoluted  $^{13}\text{C}$  DD/MAS NMR spectra of Ala  $\text{C}\beta$  carbons of hydrated  $[3-^{13}\text{C}]$ Ala-,  $[3-^{13}\text{C}]$ Ser- and  $[3-^{13}\text{C}]$ Tyr-*B. mori* silk fibroin sponges prepared with (a) Glycerin (Glyc), (b) Poly(ethylene glycol diglycidyl ether) (PGDE) and (c) Poly(ethylene glycol) (PEG) as porogen (SF/porogen ratio 70:30 w/w). Here, r.c.: random coil and h.r.c.: hydrated random coil.



S-2

Observed and deconvoluted  $^{13}\text{C}$  DD/MAS NMR spectra of Ser C $\beta$  carbons of hydrated  $[3-^{13}\text{C}]$ Ala-,  $[3-^{13}\text{C}]$ Ser- and  $[3-^{13}\text{C}]$ Tyr-*B. mori* silk fibroin sponges prepared with (a)Glycerin (Glyc), (b) Poly(ethylene glycol diglycidyl ether) (PGDE) and (c) Poly(ethylene glycol) (PEG) as porogen (SF/porogen ratio 70:30 w/w). Here, r.c.: random coil and h.r.c. : hydrated random coil.



S-3

Observed and deconvoluted  $^{13}\text{C}$  DD/MAS NMR spectra of Tyr  $\text{C}\beta$  and Gly  $\text{C}\alpha$  carbons of hydrated  $[3-^{13}\text{C}]\text{Ala-}$ ,  $[3-^{13}\text{C}]\text{Ser-}$  and  $[3-^{13}\text{C}]\text{Tyr-}$  *B. mori* silk fibroin sponges prepared with (a) Glycerin (Glyc), (b) Poly(ethylene glycol diglycidyl ether) (PGDE) and (c) Poly(ethylene glycol) (PEG) as porogen (SF/porogen ratio 70:30 w/w). Here, r.c.: random coil and h.r.c. : hydrated random coil.