Electronic Supplementary Material (ESI) for RSC Advances.

Dip- and spin-assisted stereocomplexation-driven LbL self-assembly involving homochiral PVA-g-OLLA and PVA-g-ODLA copolymers

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Electronic supporting information

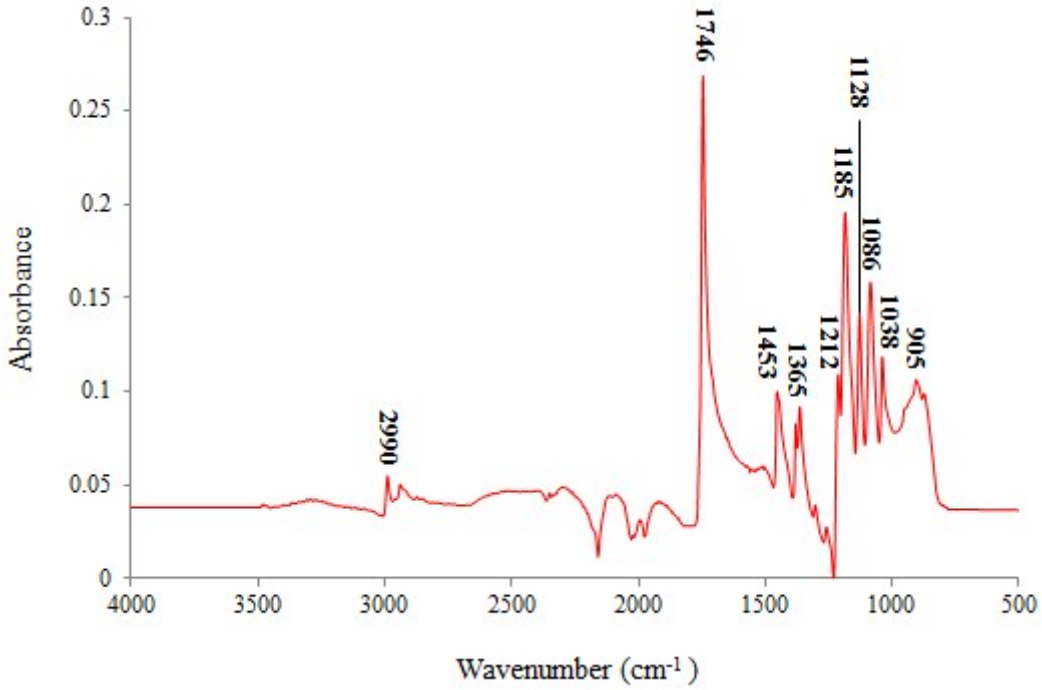


Fig. SI 1 ATR FT-IR spectrum of the $[PVA\text{-}g\text{-}OLLA/PVA\text{-}g\text{-}ODLA]_{25}$ (DS_{Lac} = 8 %) film deposited by "dip-coating".

Absorption band (cm^{-1})	Attribution
2990	υ_{-CH}
1746	$\upsilon_{-C=O}$ (SC)
1453	δ_{-CH3}
1365	δ_{-CH-}
1212	$\delta_{-C=O}$
1185 ; 1128 ; 1086	υ_{-C-O-}
1038	υ_{-C-CH3}
905	Band of crystalline form of the stereocomplex (helix 3_1)

Table SI 1. Assignment of the absorption bands of the different signals present in the FTIR spectrum of the $[PVA\text{-}g\text{-}OLLA/PVA\text{-}g\text{-}ODLA]_{25}$ (DS_{Lac} = 8 %) film deposited by "dip-coating".

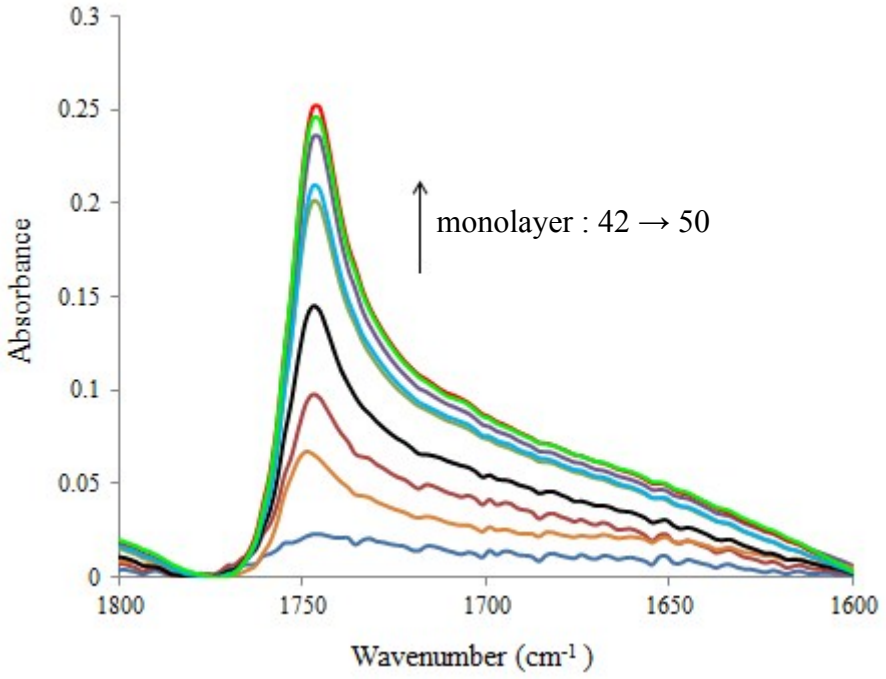


Fig. SI 2 Zoom of the evolution of the IR intensity of the C=O absorbance at 1746 cm^{-1} of the [PVA-g-OLLA/PVA-g-ODLA] film (DS_{Lac} = 8 %) after deposition by "spin-coating" from 42 to 50 monolayers.

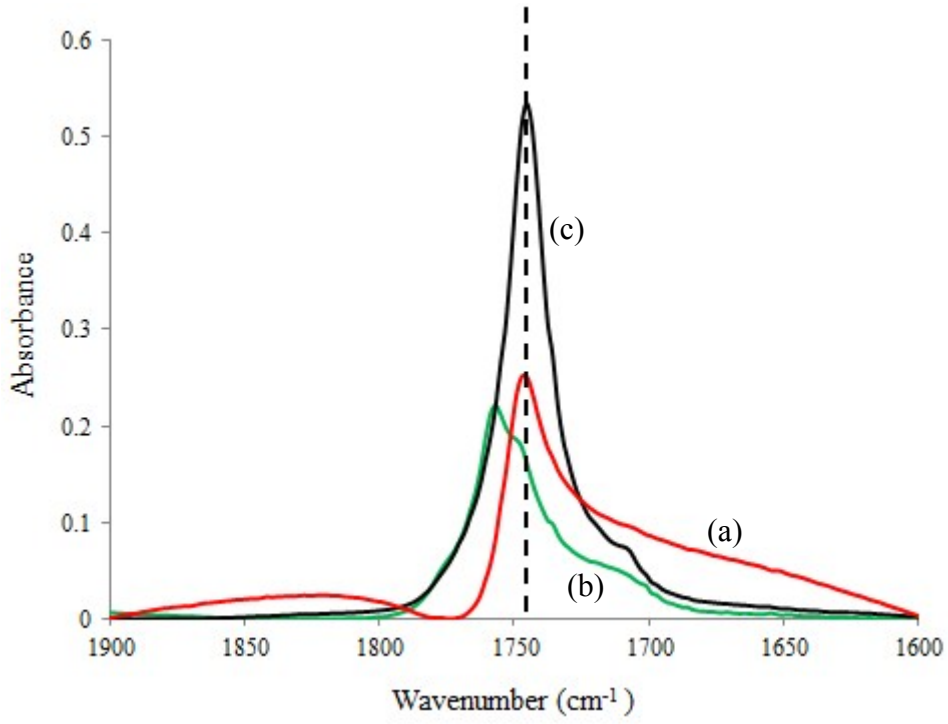


Fig. SI 3 Zoom of ATR FT-IR spectrum of the [PVA-g-OLLA/PVA-g-ODLA]$_{25}$ after deposition by " spin-coating" of 50 layers (a), of pure PVA-g-ODLA (b) and of a model (PVA-g-OLLA/PVA-g-ODLA) stereocomplex.

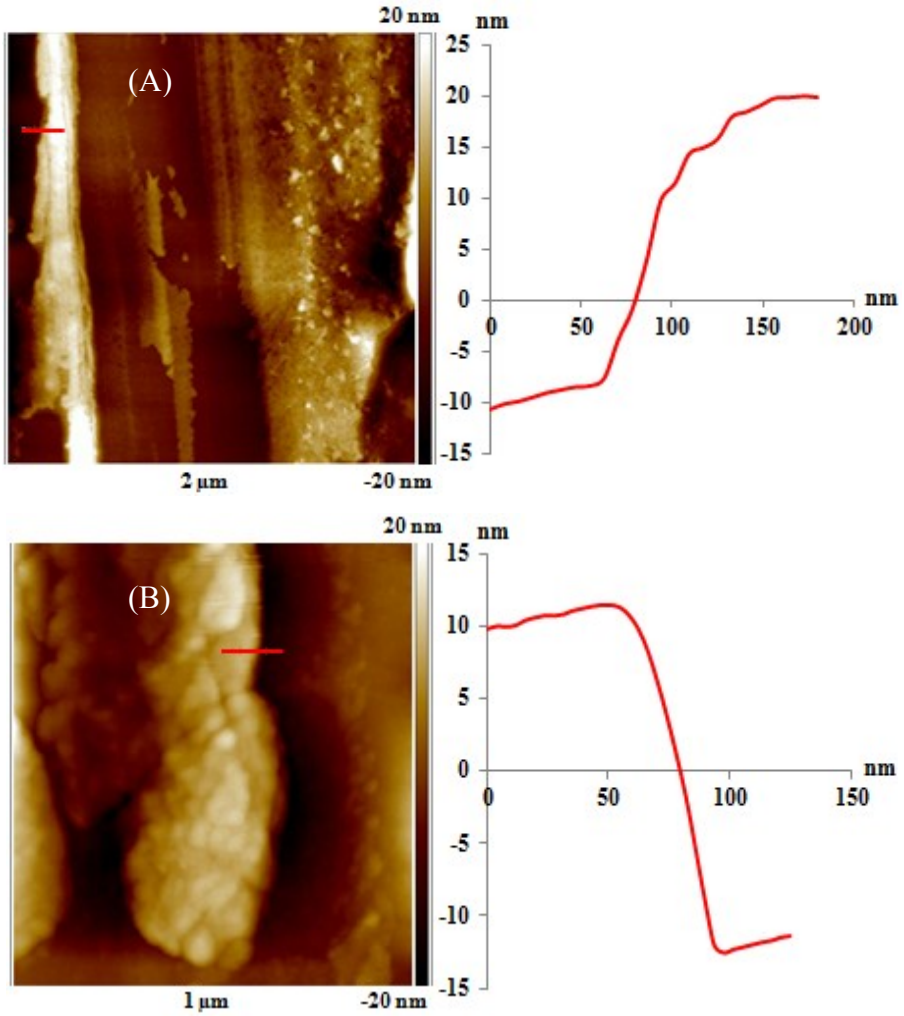


Fig. SI 4 AFM topologic images of a scratch applied onto the [PVA-g-OLLA/PVA-g-ODLA]$_{25}$ (DS_{Lac} = 8 %) (50 monolayers) deposited by "dip-coating" (A) and by "spin-coating" (B) with the corresponding height profiles.

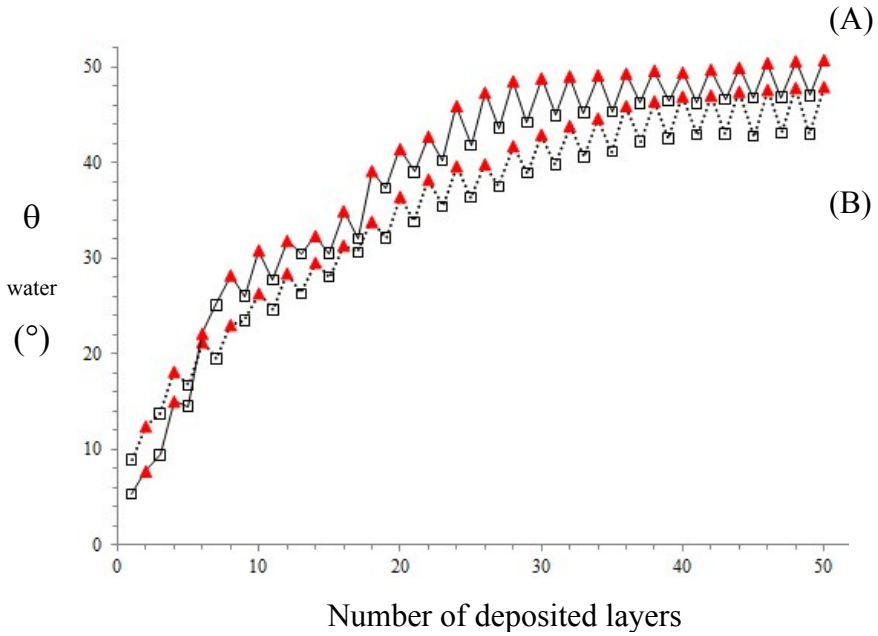
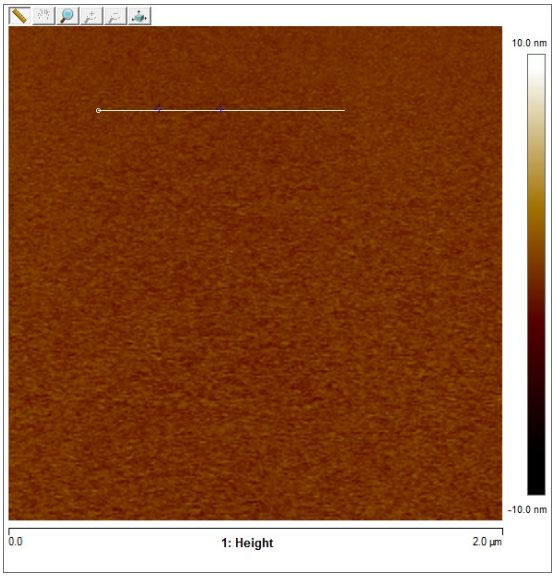


Fig. SI 5 Evolution of θ_{water} of $[PVA\text{-}g\text{-}OLLA/PVA\text{-}g\text{-}ODLA]_n$ multilayer films as a function of the number of monolayers deposited by "dip-coating" process for (A) DS_{Lac} = 8% and (B) DS_{Lac} = 2% (A) (PVA-g-OLLA (▲) and PVA-g-ODLA (□)).



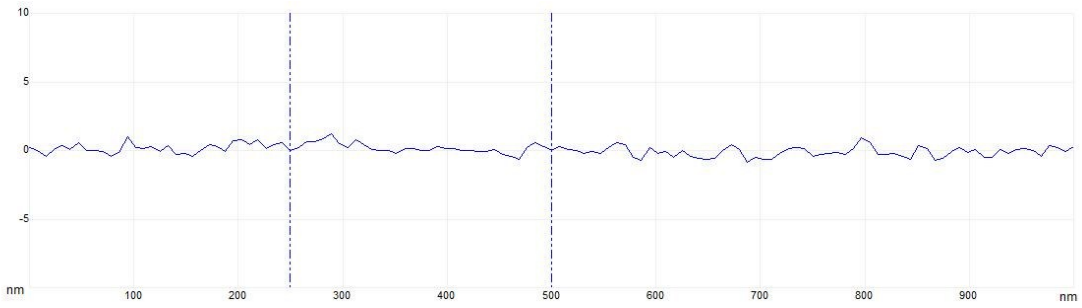


Fig. SI 6 AFM topologic image of initial silicon wafer after ozonolys step. (Rq = 0.494 nm)

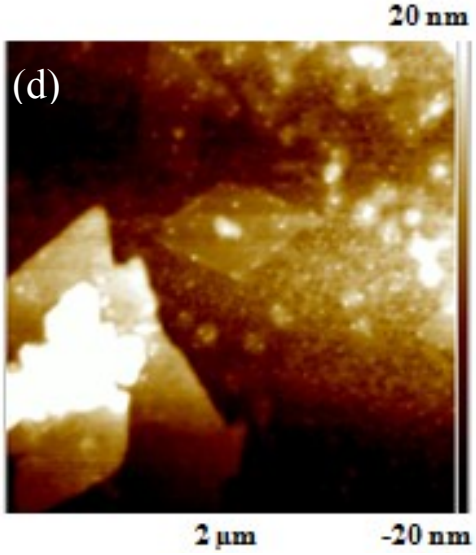


Fig. SI 7 AFM topologic images of $[PVA\text{-}g\text{-}OLLA/PVA\text{-}g\text{-}ODLA]_{25}$ (50 monolayers, DS_{Lac} = 8%) deposited by "dip-coating" after thermal treatment.