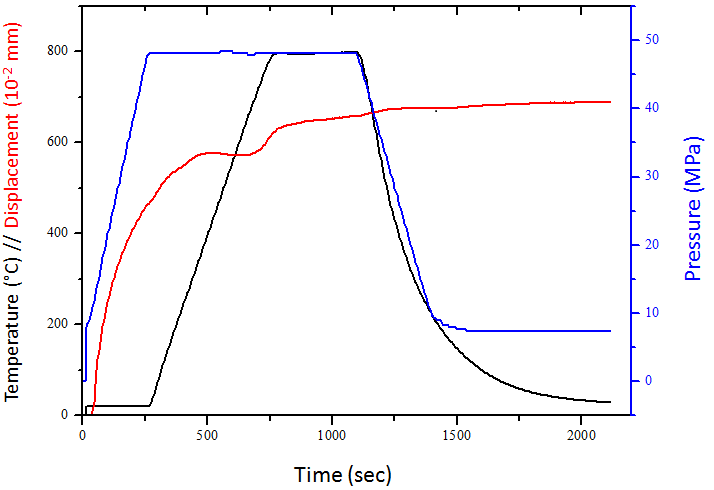
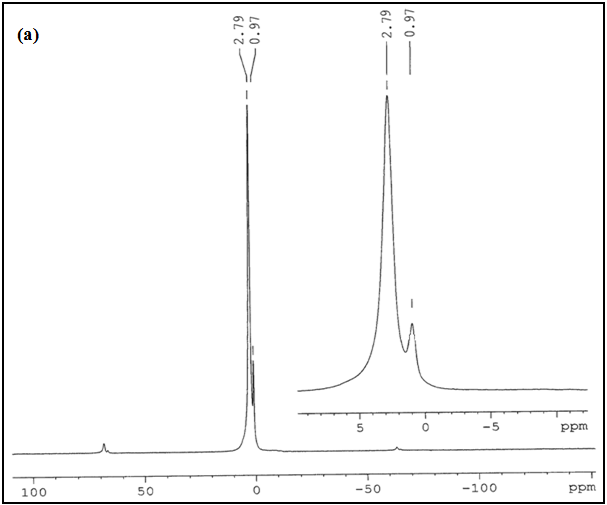
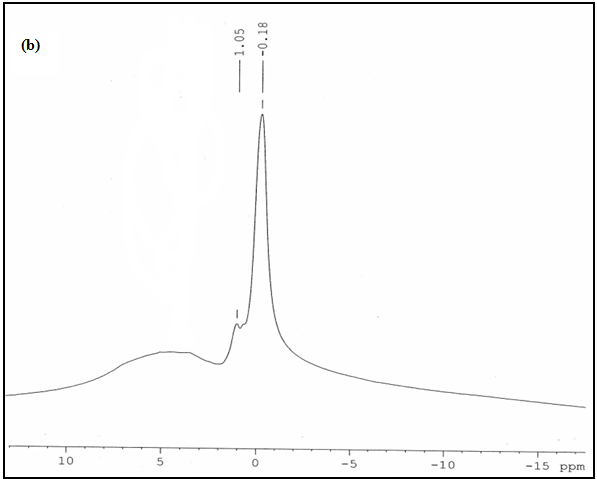
**Fig. 1:** Schematic variation of the temperature, displacement and the pressure as function of holding time SPS.

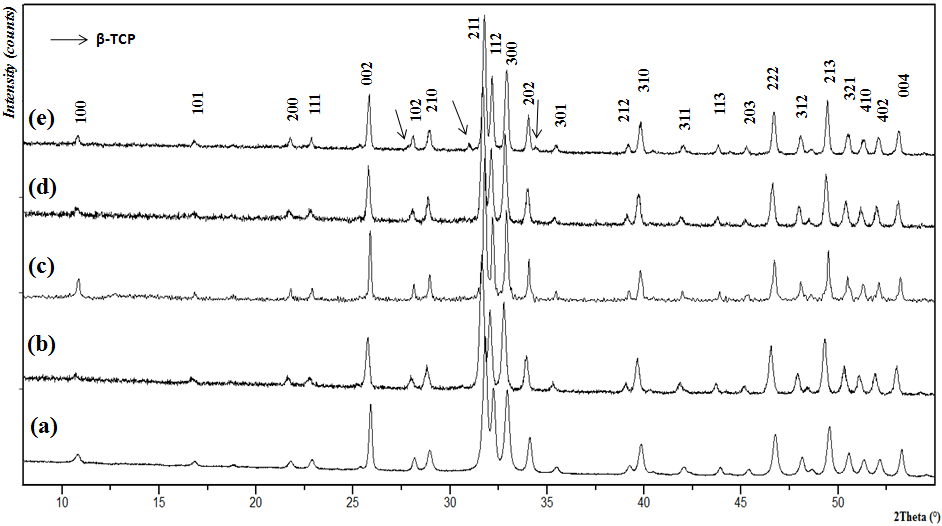
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**Fig. 2:** 1H and 31P MAS NMR spectra of hydroxyapatite powders dried at 80 °C

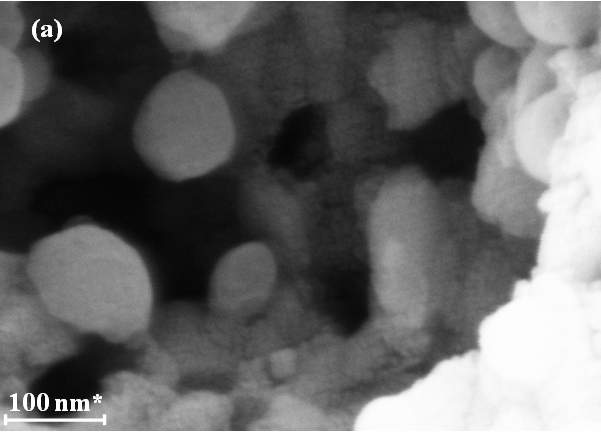
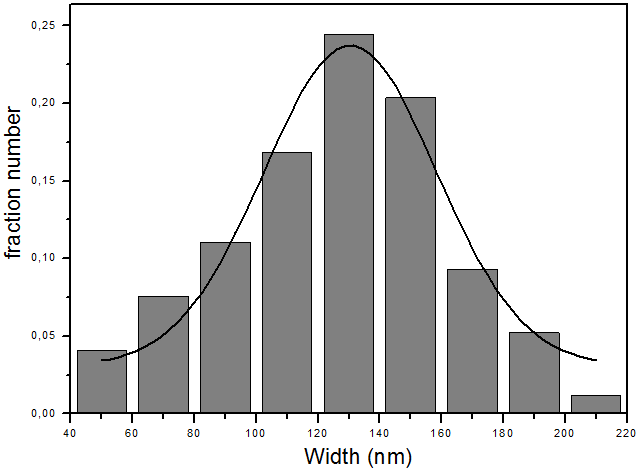


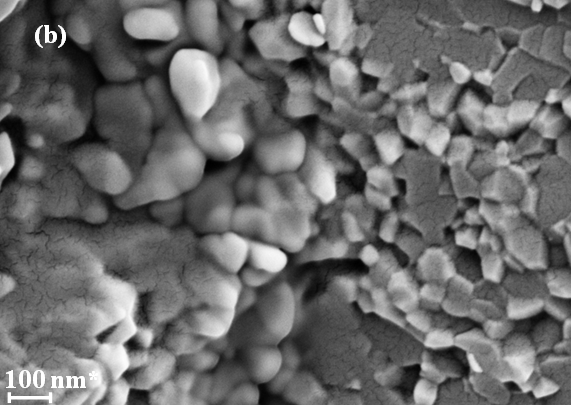
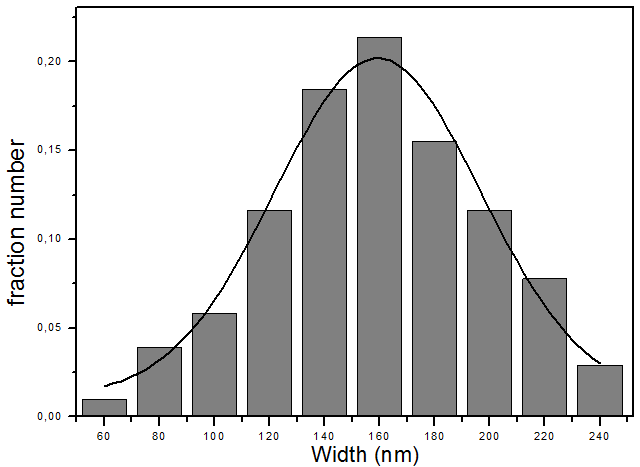


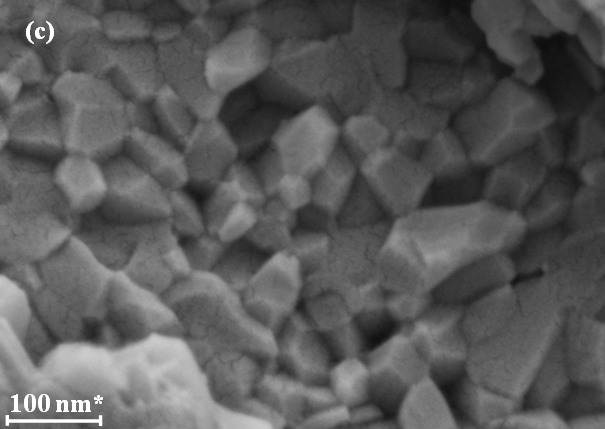
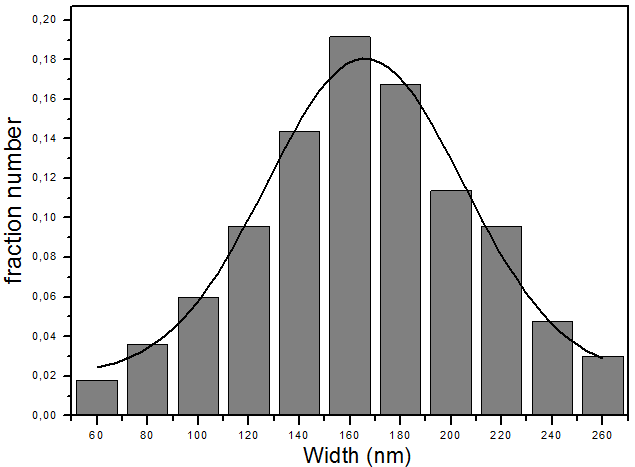
**Fig. 3:** XRD patterns of samples prepared HA in EG (a) and discs sintered at various temperatures: (b) 800°C; (c) 850°C; (d) 900°C; (e) 950°C.

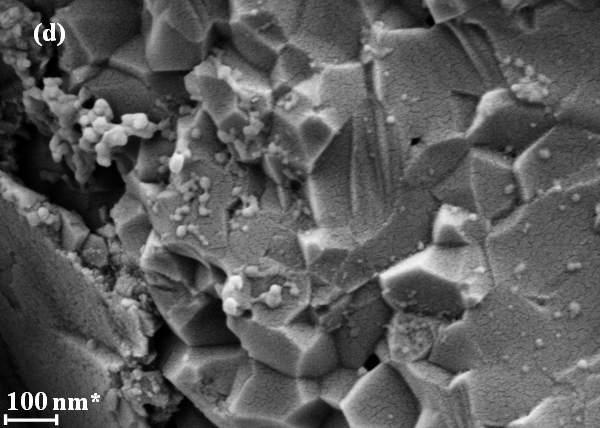
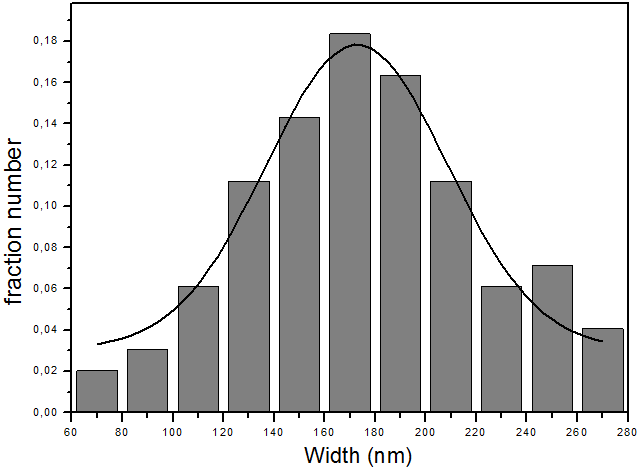


**Fig. 4:** SEM images of sample HA SPSed for 5 min under 50 MPa and their sizes distributions: (a) 800°C; (b) 850°C;(c) 900°C; (d) 950°C, The fit of the distribution by a Lorentzian is also reported (black line)

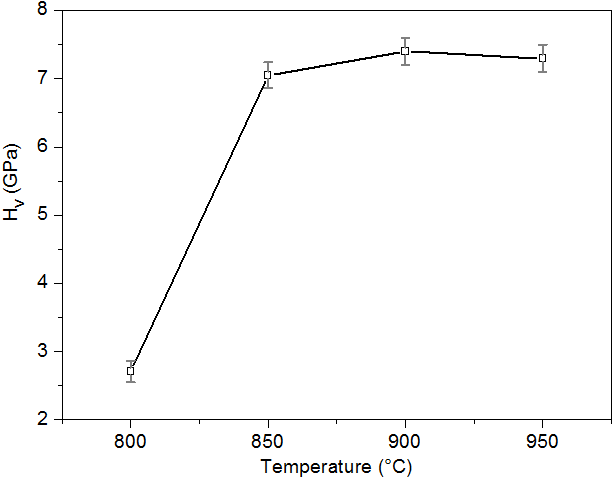
 

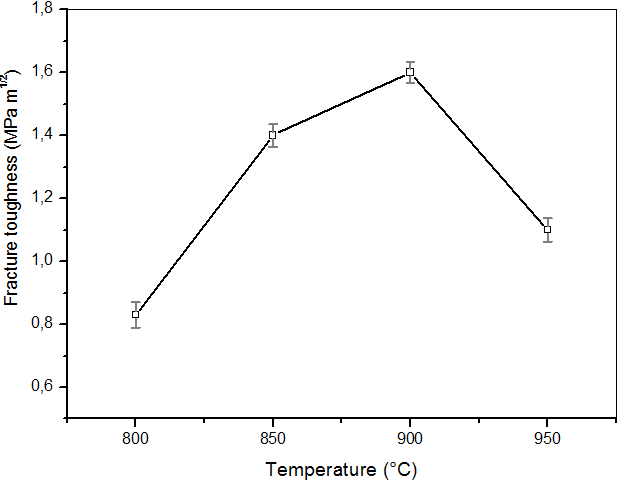
 

**Fig. 5:** The Vickers hardness of various sintered samples vs. sintering temperature.



**Fig. 6:** Effect of sintering temperature on the fracture toughness of HA sintered by SPS

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**Fig. 7:** Young's modulus (E) and Berkovich Hardness (HB) measured as a function of the sintering temperature.

