

Electrospinning, a way to prepare target material at nanoscale?

S. Chowdhury,¹ A.P. Gonçalves¹

¹ C²TN, Instituto Superior Técnico, Lisboa, Portugal

Weight(%) ↓ Sample	Ease of Fibers Formation		
	Y(acac) ₃	Y(Ac) ₃	Y ₂ (Ox) ₃
10	No	No	No
15	Yes	Yes	Yes
20	Yes	Yes	Yes

Fig. of different yttrium samples with different Cellulose acetate weight %.

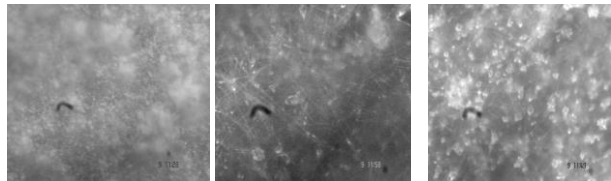


Fig. of microscopic View of Y(acac)₃ with a)10% b)15% and c) 20% of cellulose acetate (wt %).

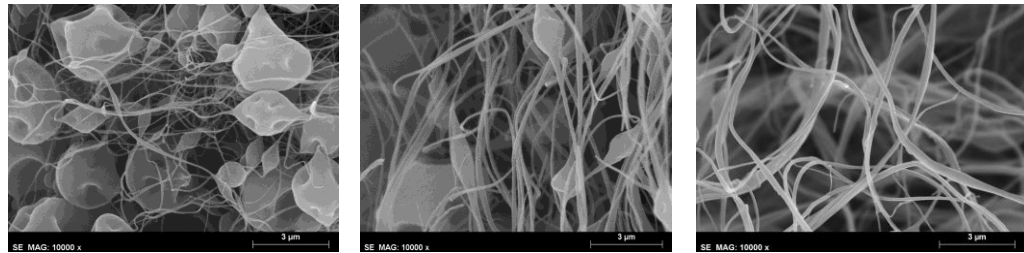


Fig. of SEM images of fibers for Y-acac precursor of Y/C= 1/4 of a) 10, b)15 and c) 20%. (From Left).

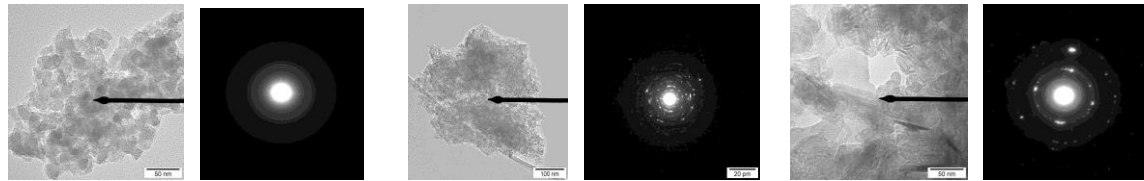


Fig. of TEM Results after heat treatment at 650^o, 1600^o and 1650^oC of Y-acac precursor fiber.

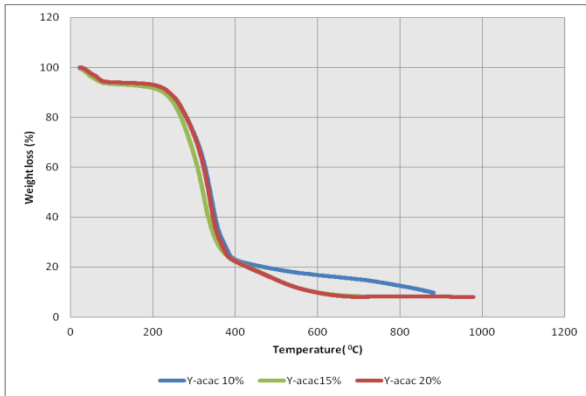


Fig. of TGA results of yttrium acetyl acetate precursors with Y/C=1/4.

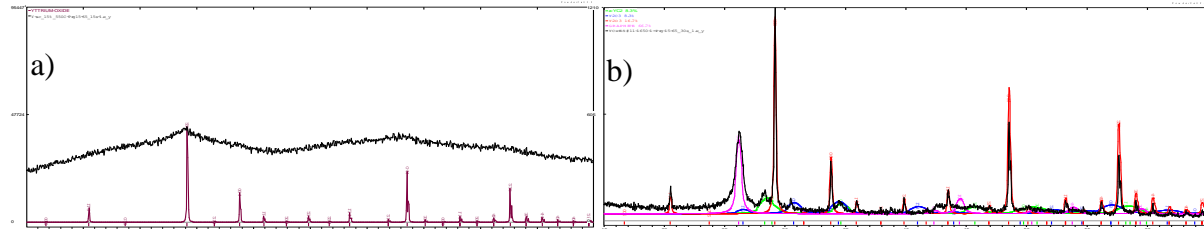


Fig. of XRD diffractograms of Y(Ac)₃ (15%) nanofiber after a) decomposition at 450°C (black) and simulation for the Y₂O₃ compound (red) and b) after treated at 1650°C (black) and simulations (red:Y₂O₃, violet: graphite, green: YC₂, blue: Y₂C₃).

Y-nanofiber UCx-nanofiber

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 642889.