Electronic Supplementary Material (ESI) for RSC Advances.

Suppoting information (ES-2)

L-tyrosine loaded nanoparticles: An efficient catalyst for synthesis of dicoumarols and Hantzsch 1,4-dihydropyridines.

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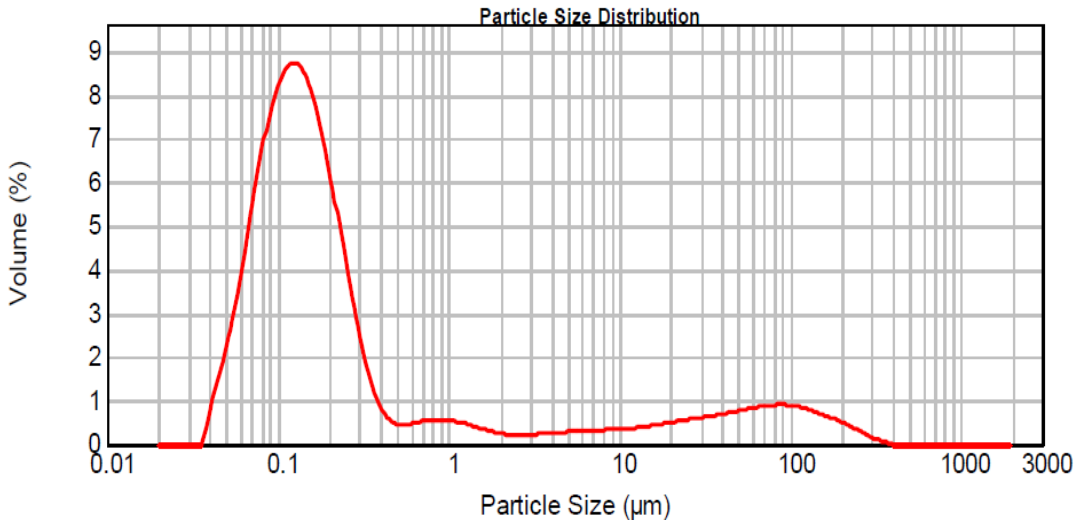
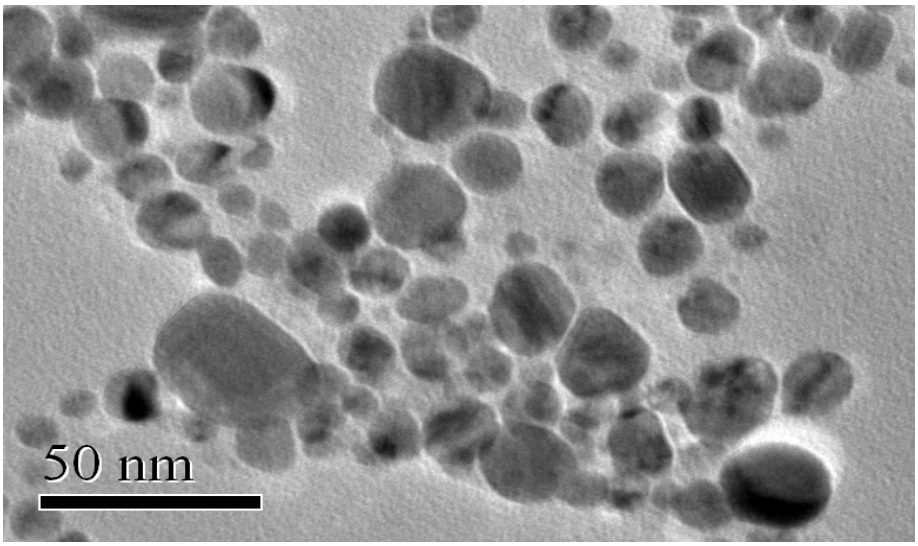
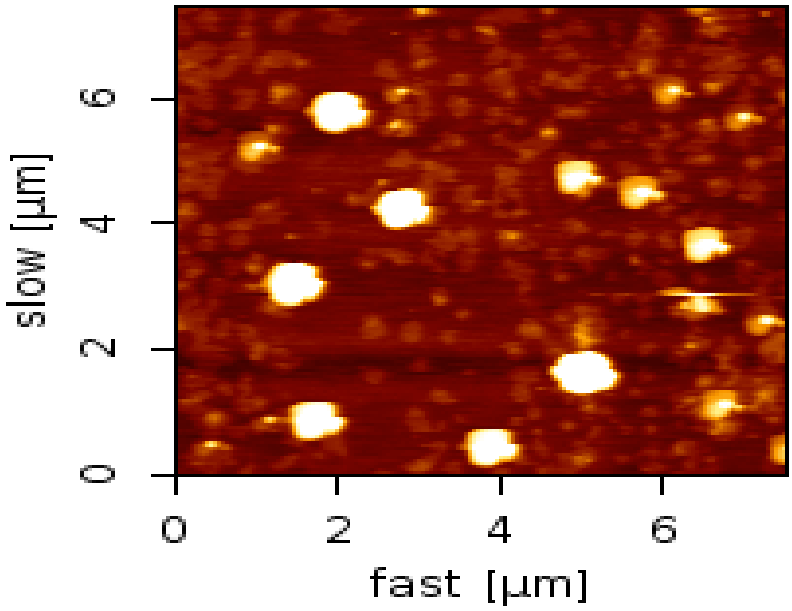
Particle size Analysis of L- Tyrosine loaded-Nanoparticles

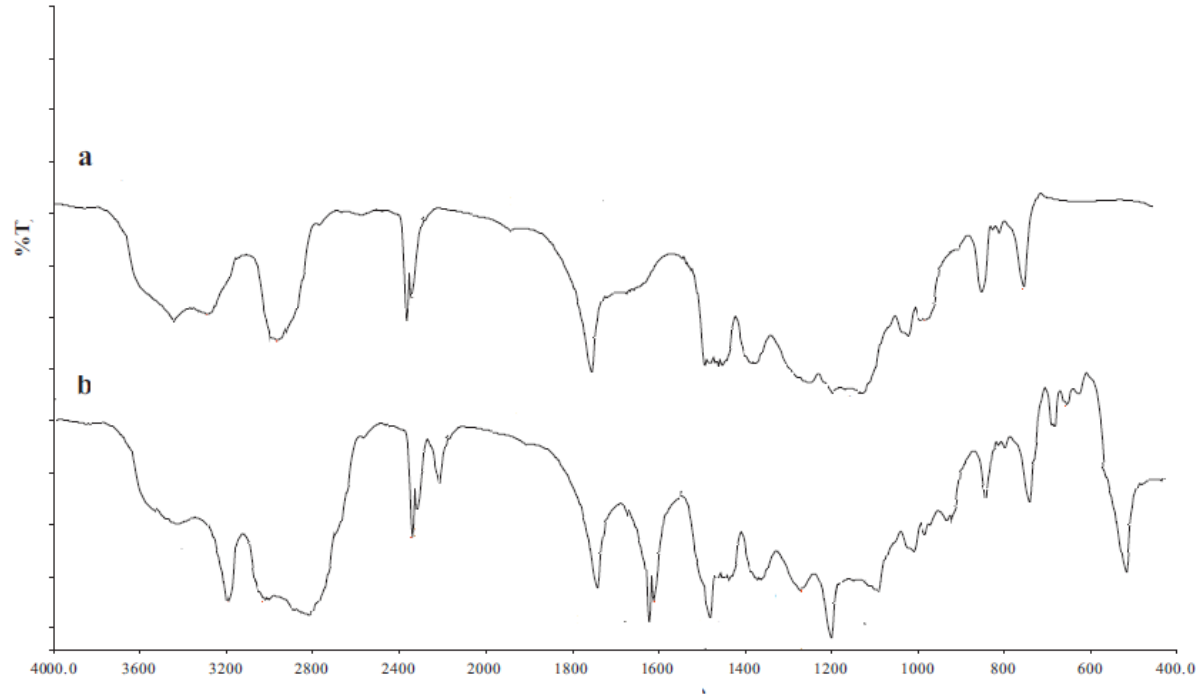


TEM Image of L-Tyrosine loaded-nanoparticles (Average Size 50 nm)



AFM image of L-Tyrosine loaded-nanoparticles





FT-IR spectra of (a) Eudragit RS 100 and (b) L-tyrosine loaded –Eudragit RS 100 nanoparticles.

IR spectrum of Eudragit RS 100 is given as (a) and L-tyrosine loaded-Eudragit RS 100 as (b). Spectrum (a) shows very sharp peaks in 3429.9, 2953.8, 2360.5, 2342.6, 1734.4, 1458.4, 1388.2, 1247.0, 1149, 850.4, 752.2 cm^{-1}

When compared against the IR spectrum of (b) i.e the IR spectrum of L-tyrosine loaded nanoparticle shows a number of bands not present in the earlier one (in a). These new bands were found to correspond very closely to a number of fundamental vibrational modes of L-tyrosine. The extra bands in trace - b against the vibrational modes of L-tyrosine are given in the following table:

Serial No	Wavenumber (cm^{-1})	Vibrational mode
1	3200.9	Amide A band
2	2803.0	C-H stretching

3	1640.5	amide-I band
4	1500.2	ring vibration of the phenyl group
5	1200	C-O stretching of the phenolic group