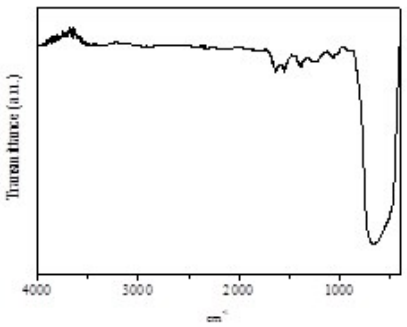
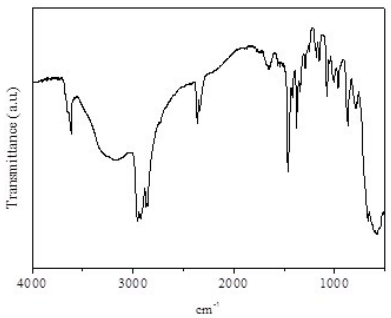
Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

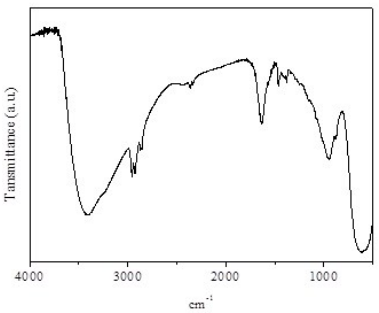
Fructose Conversion in the Presence of Sn(IV) Catalysts Exhibiting High Selectivity to Lactic Acid



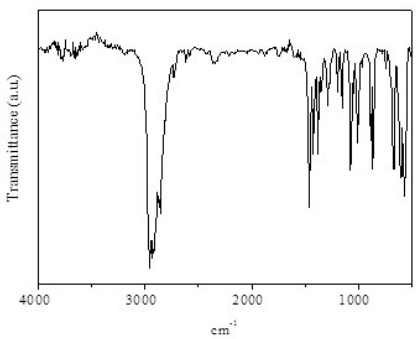
SnO_2



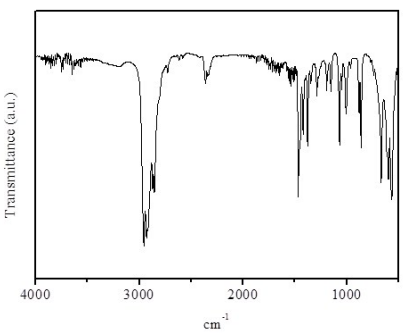
BTA before reaction



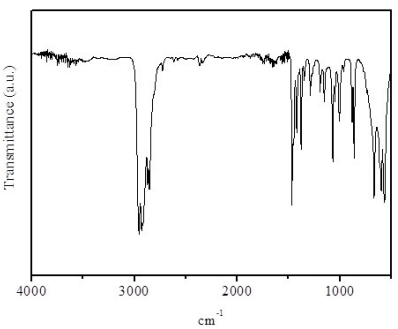
BTA after 4 h (without fructose)



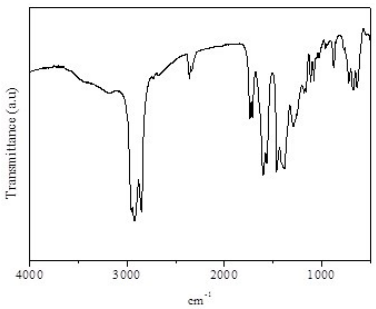
DBTO before reaction



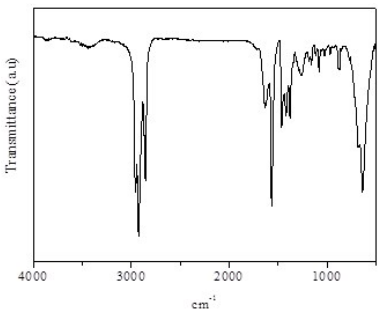
DBTO after 0.5 h (without fructose)



DBTO after 4 h (without fructose)



DBTDL before reaction



DBTDL after 4 h (without fructose)

Fig.S1 Spectra in the medium infrared region of Sn(IV) catalysts, before and after 4 h of hydrolysis (190 ºC)

Table S1. Soluble products identified from fructose conversion at 190°C (yield (%)),using SnO_2 (2.69×10^{-5} mol)

Reaction time (h)	Glucose (%)	5-HMF (%)	Levulinic Acid (%)	Formic acid (%)	Glyceraldehyde (%)	Dihydroxyacetone (%)	Pyruvaldehyde (%)	Lactic acid (%)	Acetic acid (%)	TOTAL Identified (%)
0.5	1.3	44.5	1.0	4.4	0.7	0.7	0.9	2.0	2.3	57.9
1	1.1	48.4	2.1	6.8	0.5	2.3	0.9	2.8	3.4	68.4
2	1.0	45.2	5.4	10.9	0.7	0.9	0.7	2.6	3.4	70.7

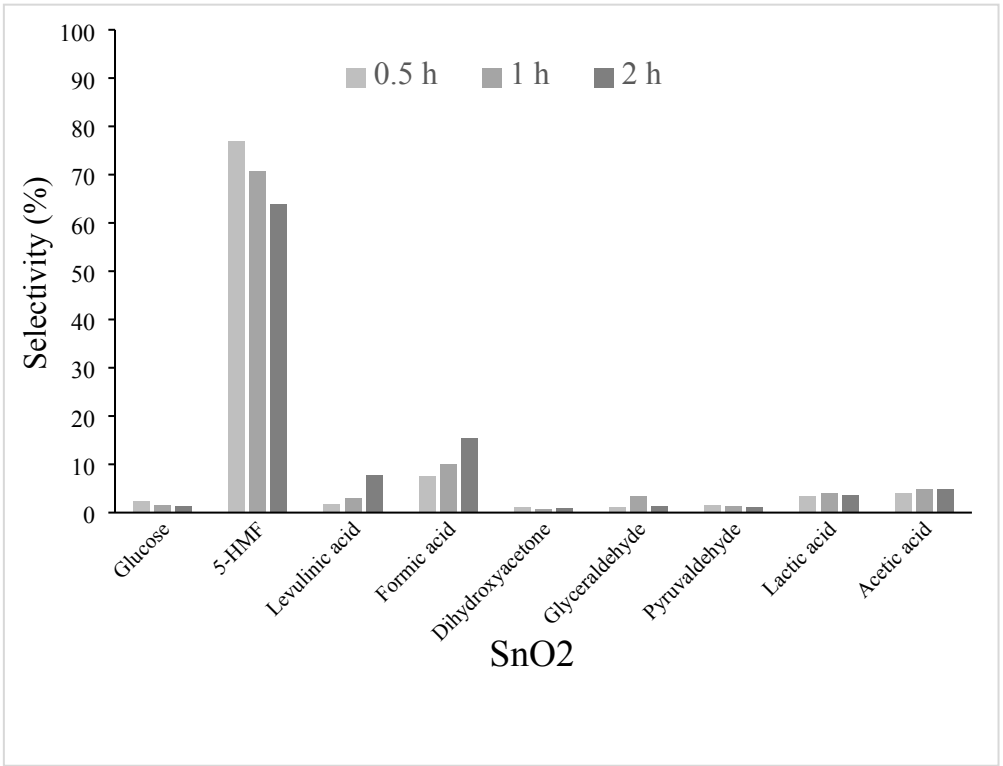


Fig. S2. Selectivity to soluble products identified from fructose conversion at 190°C, using SnO_2 (2.69×10^{-5} mol)