Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting information

Dehydration of lactic acid to acrylic acid over lanthanum phosphate catalysts: role of the Lewis acid sites

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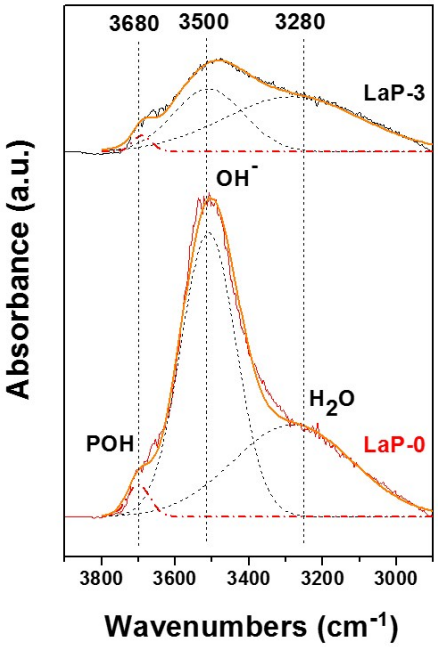

Fig. S1 DRIFTS spectra of LaP-0 and LaP-3.

Table S1 Catalytic results of the dehydration of lactic acid to acrylic acid over LaP-0 and LaP-3.

Catalysts[a]	Conversion (%)	Selectivity (%)						Carbon balance
		Acrylic acid	Acetaldehyde	2,3-pentanedione	Propanoic acid	Others[b]	Fouling[c]	
LaP-0	91.1	39.8	47.1	0.1	0.4	10.6	2.1	100.1
LaP-3	67.4	49.6	21.2	0.2	3.1	20.8	2.8	97.7

a. All results are based on 5 collection of time on stream (TOS), reaction temperature: 350°C, LA concentration: 20wt.%, catalyst loading: 0.2 g; b. Others include acetic acid, ethanol, hydroxyacetone and CO; c. Fouling is estimated from the weight loss after calcination of spent catalysts.