

The Inorganic Perovskite-Catalyzed Transfer Hydrogenation of Cinnamaldehyde Using Glycerol as a Hydrogen Donor

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Supplementary information

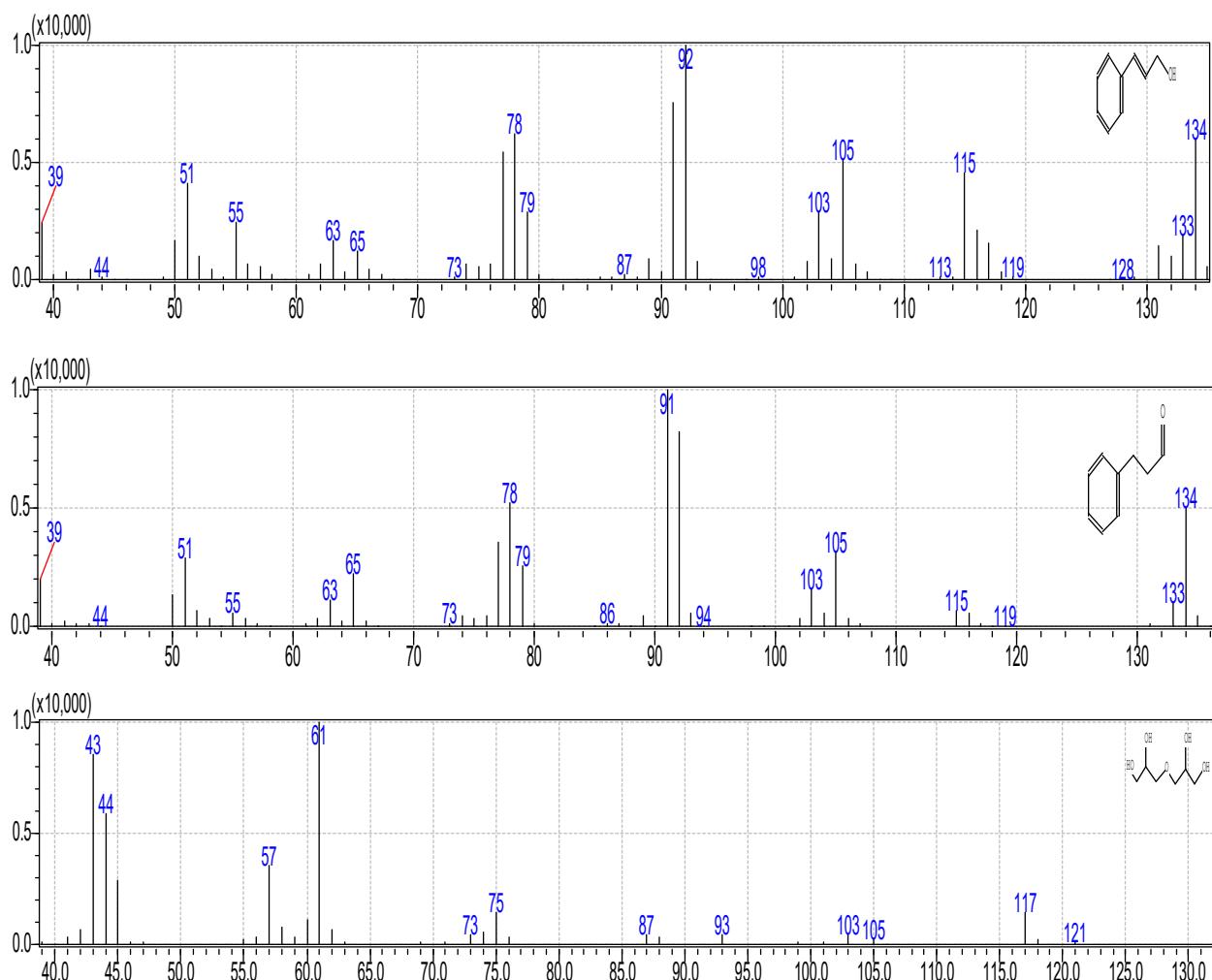


Figure S1: Mass spectrum of the major products during the cinnamaldehyde catalytic transfer

hydrogenation reaction, that is, cinnamyl alcohol, cinnamaldehyde and diglycerol, respectively.

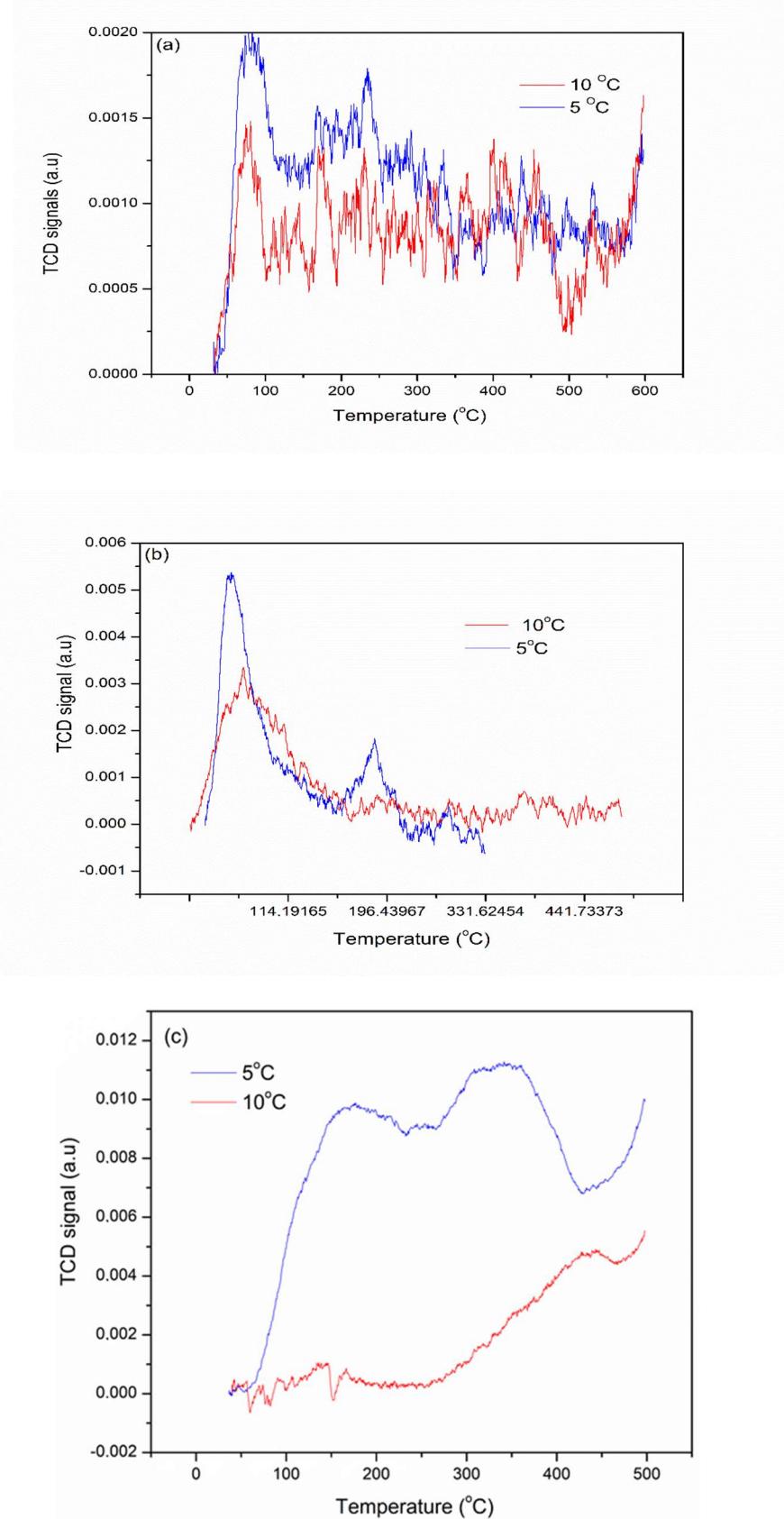


Figure S2: Carbon dioxide-temperature-programmed reduction profiles for (a) LaFeO₃, (b) LaSnO₃, and (c) SnO₂ at various temperature ramping.

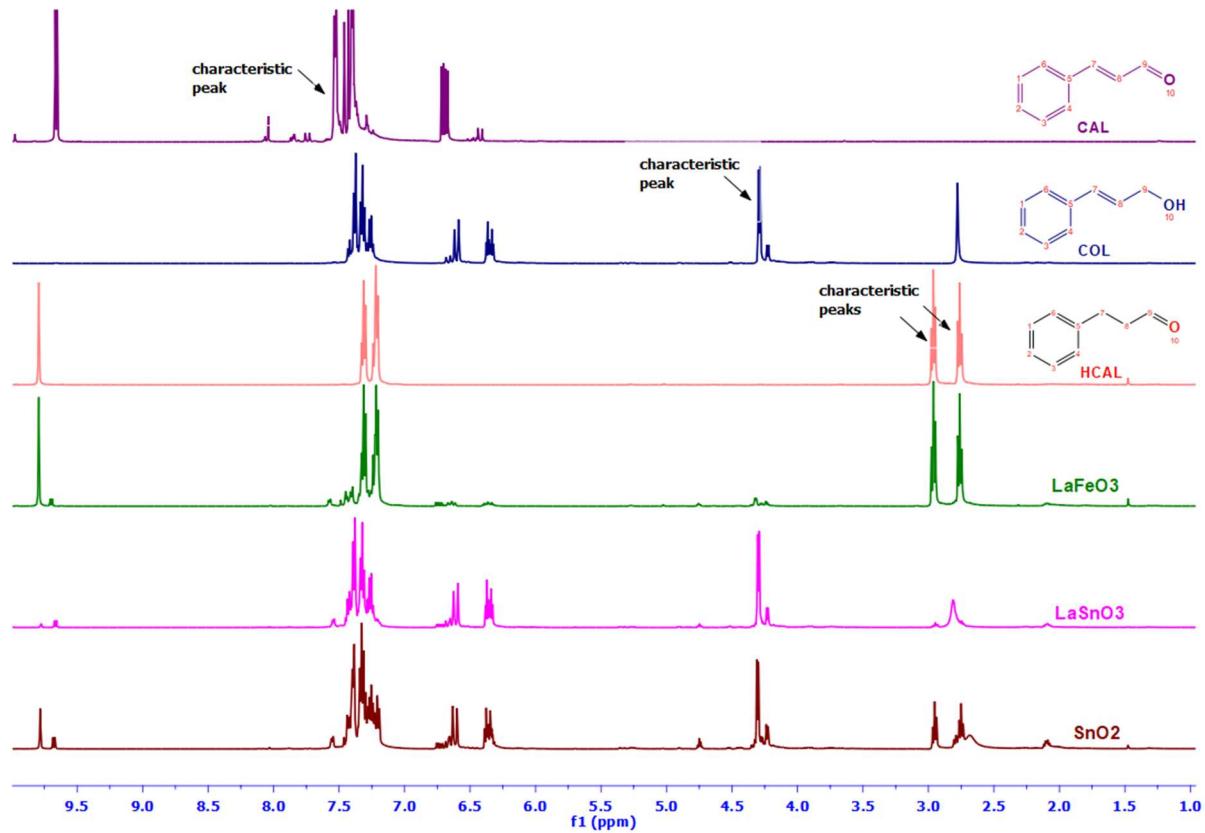


Figure S3: A stack of ¹H-NMR from a product mixture of CAL, COL and HCAL.

Table S1: Mass loss and selectivity variations during different reaction cycles for perovskite and SnO₂ (Recyclability results)

| | SnO ₂ | LaFeO ₃ | LaSnO ₃ | Percentage recovery (%) | Selectivity (%) | | | | |
|-----|------------------|--------------------|--------------------|-------------------------|--------------------|--------------------|------------------|--------------------|--------------------|
| Run | | | | SnO ₂ | LaFeO ₃ | LaSnO ₃ | SnO ₂ | LaFeO ₃ | LaSnO ₃ |
| 1 | 0.075 | 0.075 | 0.075 | 100 | 100 | 100 | 40 | 18 | 6 |
| 2 | 0.071 | 0.074 | 0.074 | 95 | 98 | 99 | 48 | 41 | 48 |
| 3 | 0.069 | 0.072 | 0.073 | 93 | 96 | 98 | 53 | 45 | 65 |
| 4 | 0.067 | 0.069 | 0.071 | 89 | 93 | 95 | 65 | 63 | 78 |
| 5 | 0.064 | 0.066 | 0.068 | 85 | 88 | 92 | 74 | 92 | 78 |