

# Supporting Information

## Activity and stability studies of H-transfer reduction reactions of aldehydes and ketones over aluminium isopropoxide heterogenised catalysts

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The yield was calculated using the following expression:

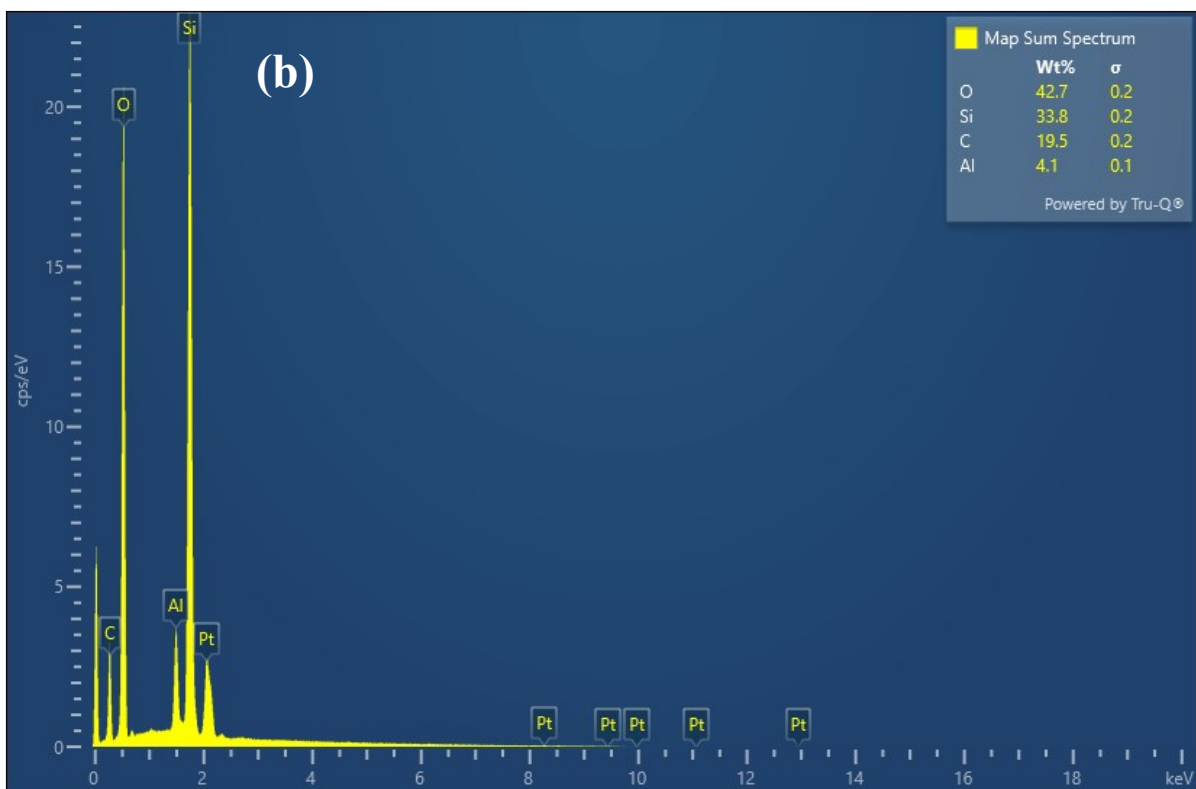
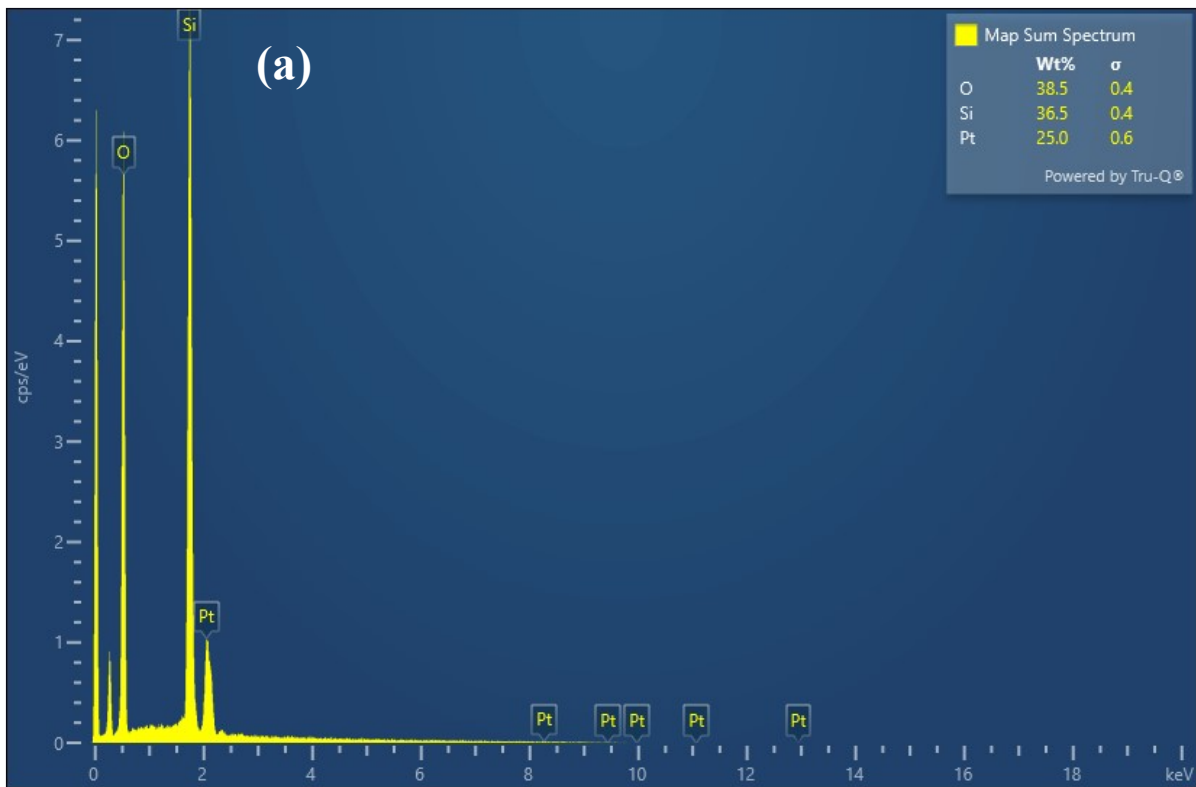
$$Y(\%) = \frac{\text{moles of product}}{\text{initial moles of limiting reactant}} \times 100$$

Equation S1

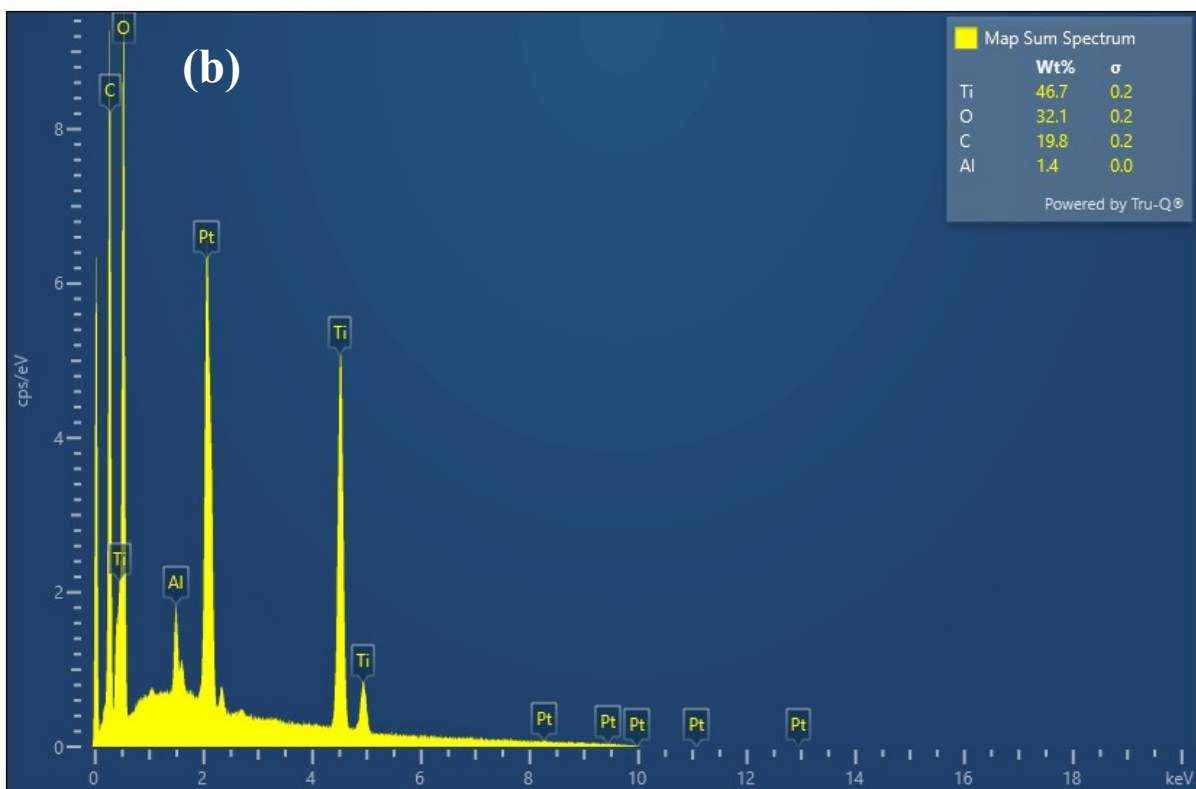
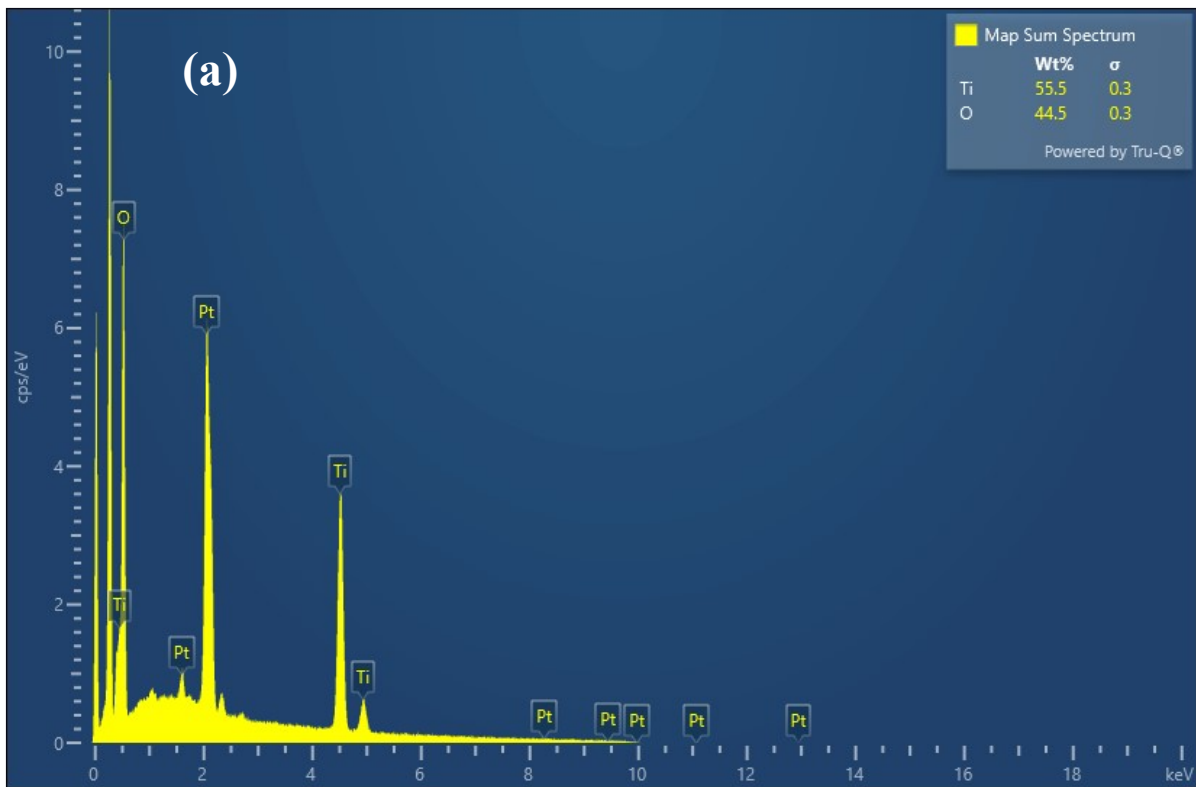
The turnover frequency (TOF) was determined using the expression:

$$TOF = \frac{mmol_{product}}{mmol_{catalyst} \times time(s)}$$

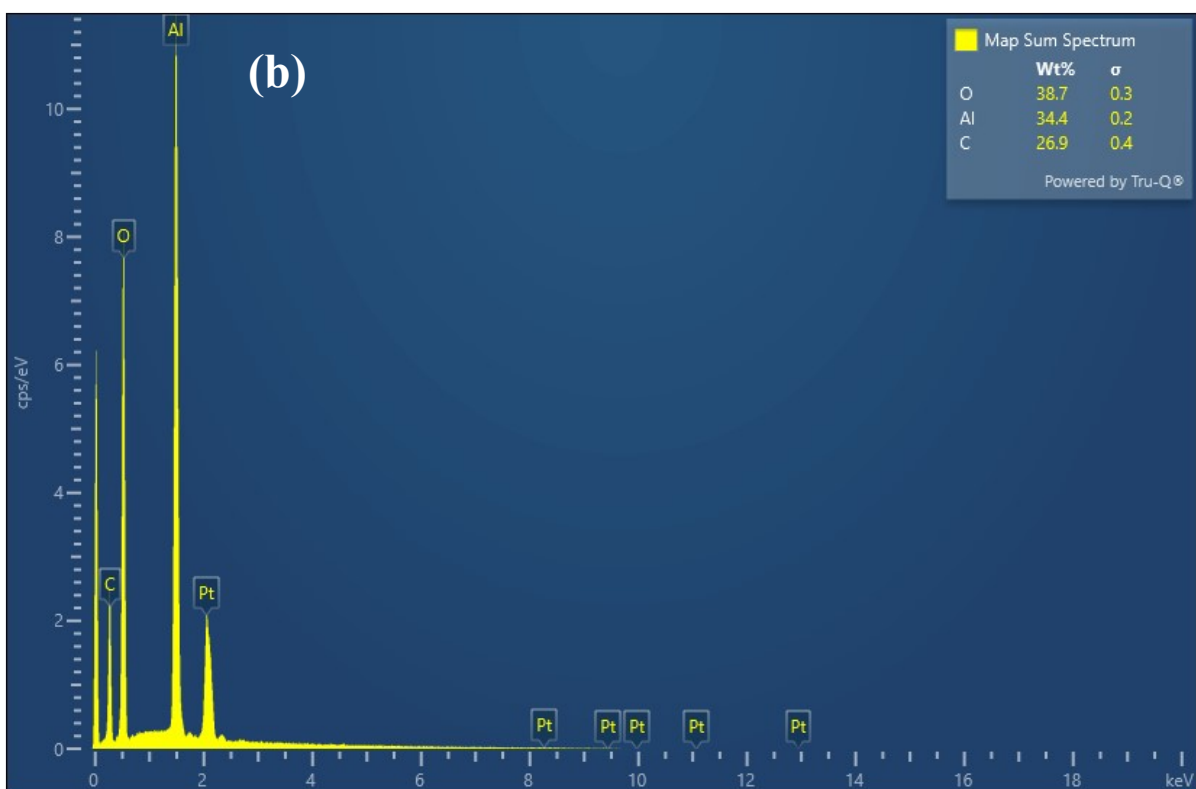
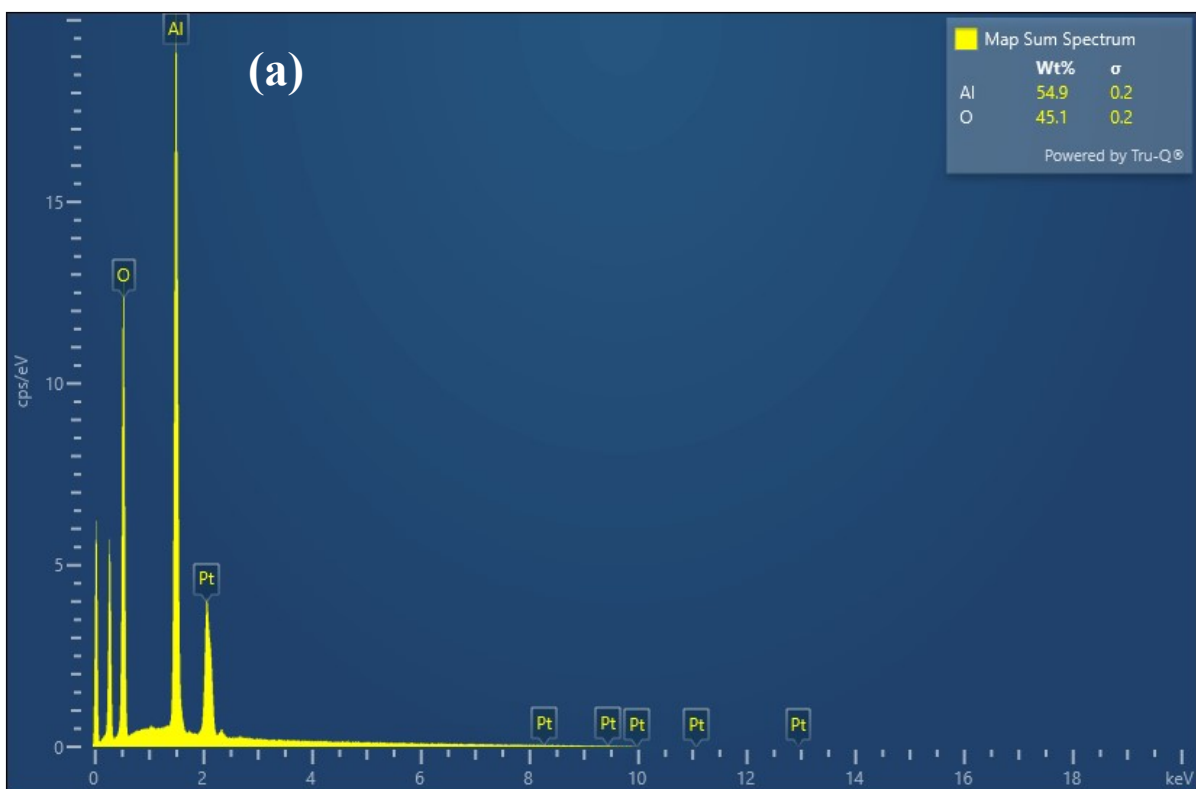
Equation S2



**Figure S1.** EDX spectrum of (a)  $\text{SiO}_2$  and (b)  $\text{Al}(\text{O}^i\text{Pr})_3\text{-SiO}_2$ . Pt comes from the coating of the sample as part of sample preparation for the analysis.

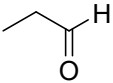
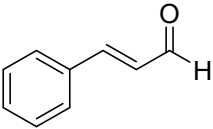
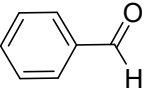
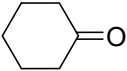
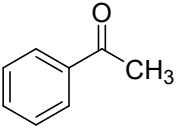


**Figure S2.** EDX spectrum of (a)  $\text{TiO}_2$  and (b)  $\text{Al}(\text{O}^i\text{Pr})_3\text{-TiO}_2$ . Pt comes from the coating of the sample as part of sample preparation for the analysis.



**Figure S3.** EDX spectrum of (a)  $\text{Al}_2\text{O}_3$  and (b)  $\text{Al}(\text{O}^i\text{Pr})_3\text{-Al}_2\text{O}_3$ . Pt comes from the coating of the sample as part of sample preparation for the analysis.

**Table S1.** Reaction data for the MPV reduction of aldehydes and ketones using heterogenised catalysts.

Substrate	$\text{Al}(\text{O}^i\text{Pr})_3\text{-SiO}_2$			$\text{Al}(\text{O}^i\text{Pr})_3\text{-TiO}_2$			$\text{Al}(\text{O}^i\text{Pr})_3\text{-Al}_2\text{O}_3$		
	Time (h)	Yield (%)	Selectivity (%)	Time (h)	Yield (%)	Selectivity (%)	Time (h)	Yield (%)	Selectivity (%)
 Propionaldehyde	4	92.5	100	4	85.2	100	4	89.9	100
 Cinnamaldehyde	4	55.4	100	6	50.1	100	6	54.6	100
 Benzaldehyde	3	95.7	100	3	87.7	100	3	91.2	100
 Cyclohexanone	5	77.5	100	5	72.2	100	5	75.6	100
 Acetophenone	5	49.5	100	5	45.5	100	5	48.4	100