

Monitoring the Formation of Carbide Crystal Phases during the Thermal Decomposition of 3d Transition Metal Dicarboxylate Complexes

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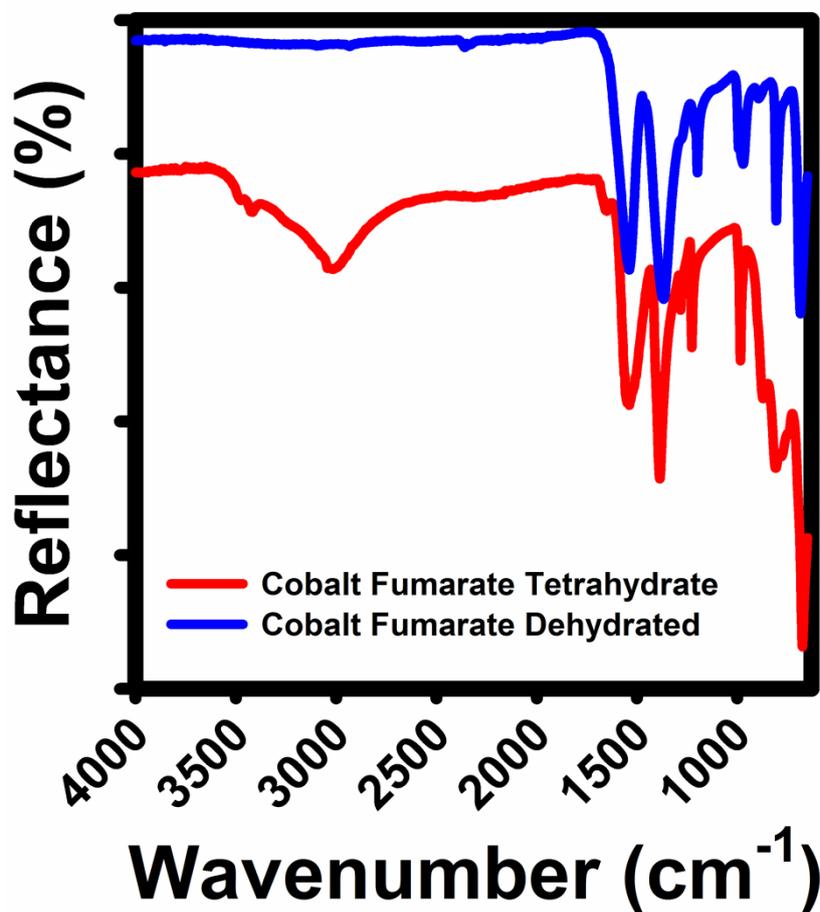
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Electronic Supplementary Information

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Figure S1. FT-IR spectra of Cobalt Fumarate tetrahydrate and Cobalt Fumarate Anhydrous powders.

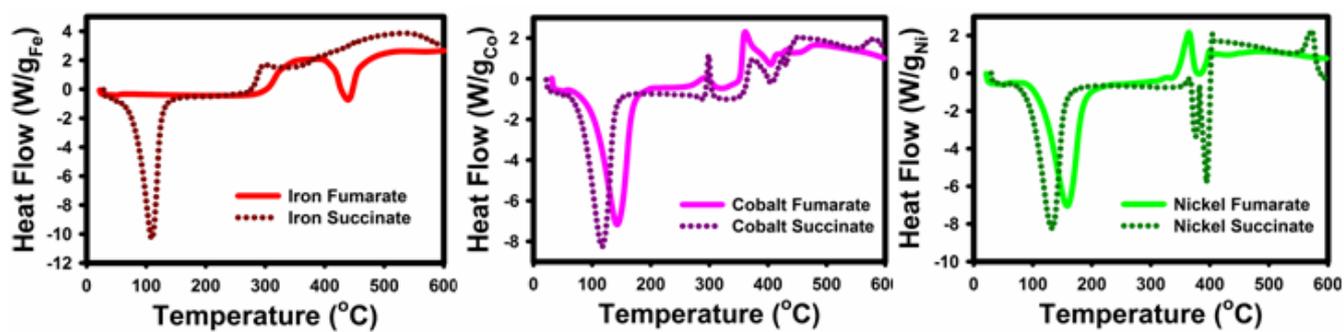


Figure S2. Differential Scanning Calorimetry thermograms for Fe, Co, and Ni fumarate and succinate complexes.

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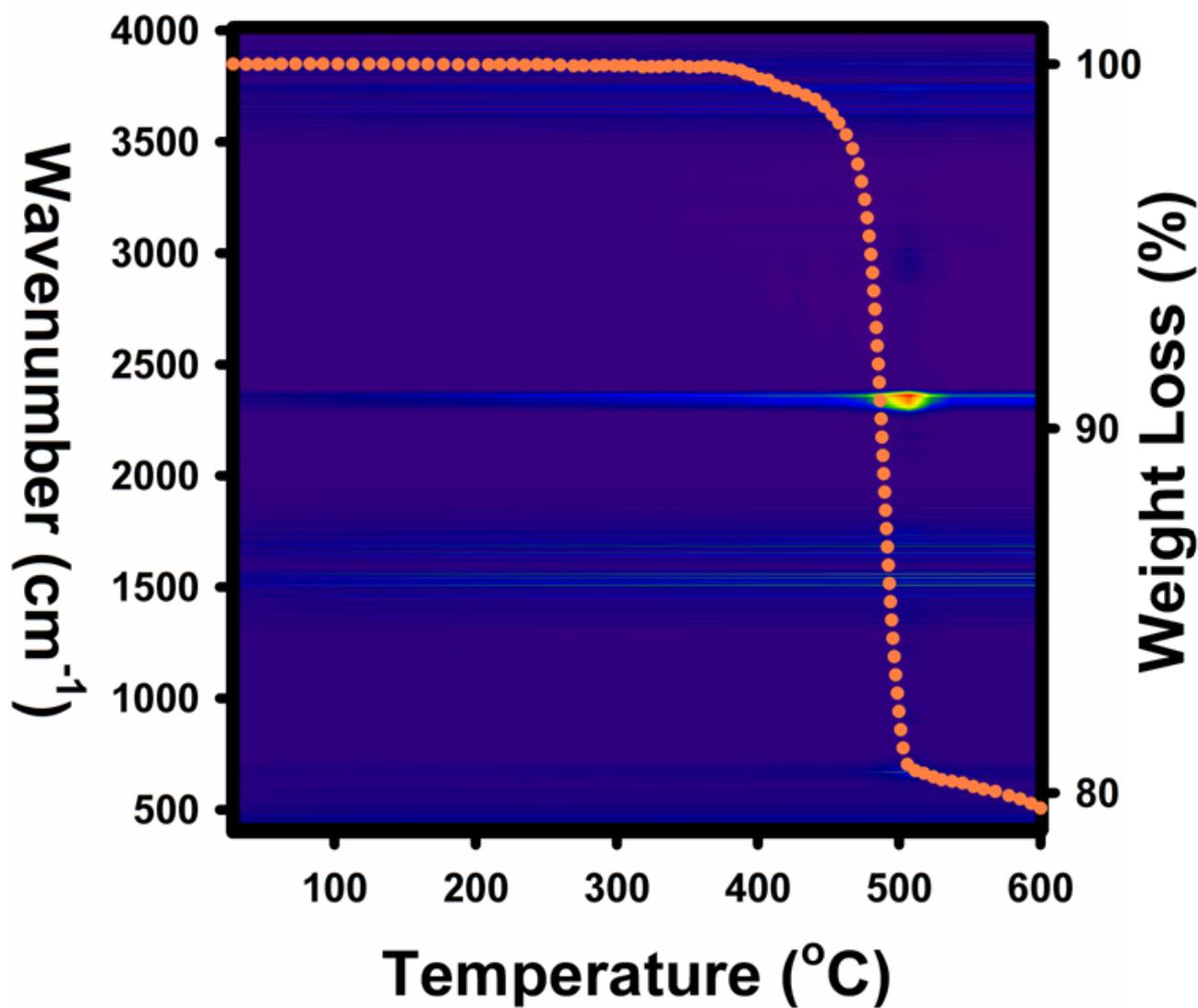


Figure S3. TGA-IR contour plot of the decomposition of Na₂Fumarate

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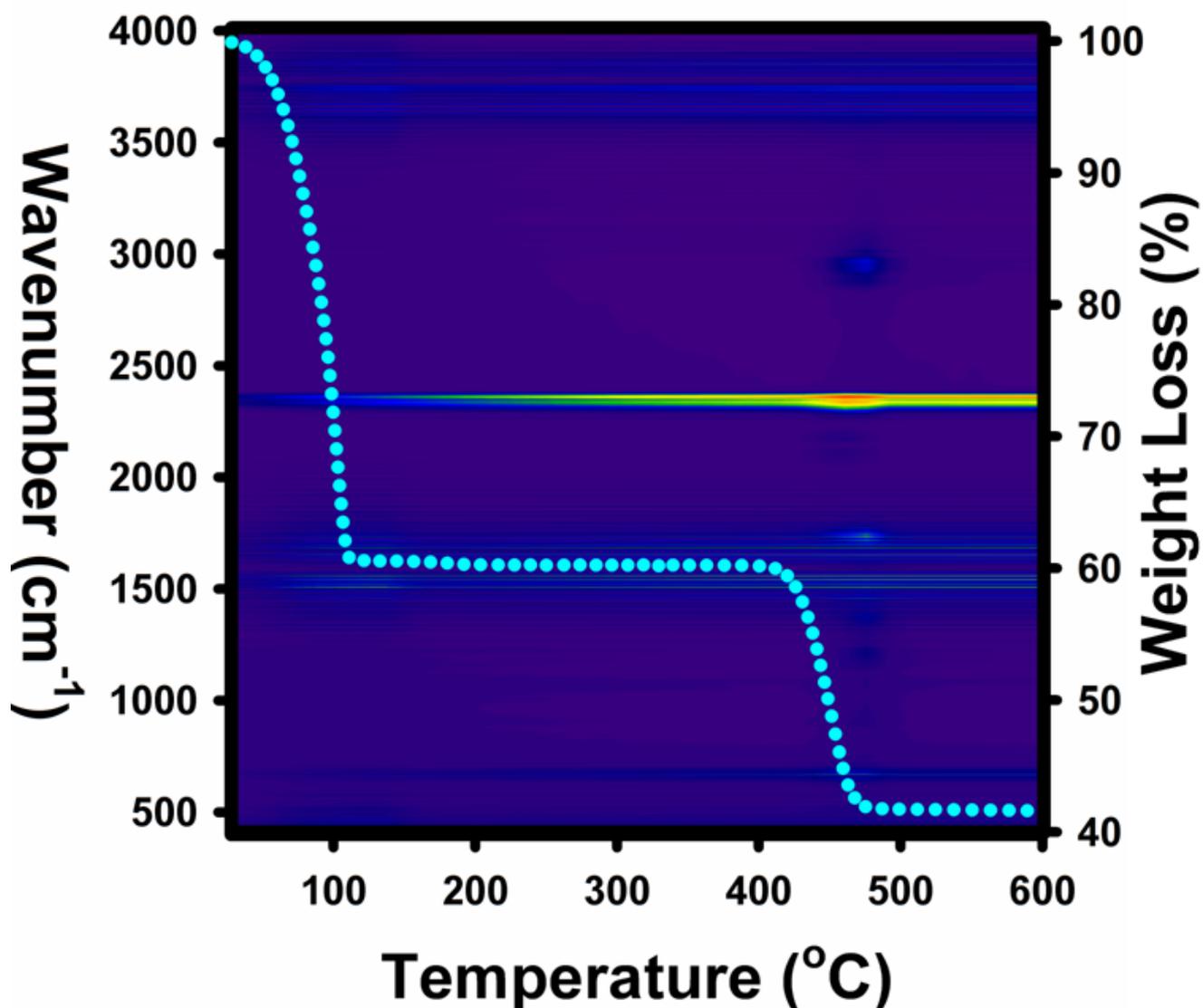


Figure S4. TGA-IR contour plot of the decomposition of Na₂Succinate tetrahydrate

Table S1. Crystallographic parameters for phases observed during Ni succinate decomposition at 350 °C

<i>Phase</i>	<i>Space Group</i>	<i>Lattice Parameters (Å)</i>			<i>Wyckoff Positions</i>	<i>Atomic Coordinates</i>		
		<i>a</i>	<i>b</i>	<i>c</i>		<i>x</i>	<i>y</i>	<i>z</i>
FCC-Ni	Fm-3m	3.539	-	-	Ni – 4a	0	0	0
HCP-Ni	P ₆₃ /mmc	2.503	-	4.090	Ni – 2c	0.33	0.66	0.25
Ni₃C	R-3c	4.582	-	13.03	Ni – 18e	0.33	0	0.25
					C – 6b	0	0	0