Supplementary Material

Selective dehydrogenation of tetrahydroisoquinolines in the presence of sulfoxides

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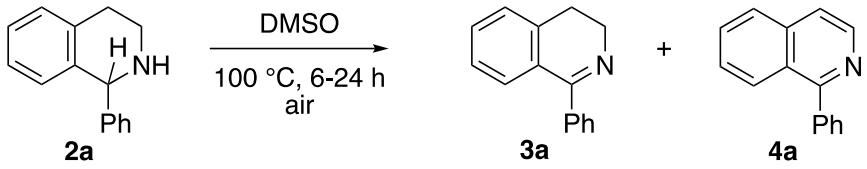
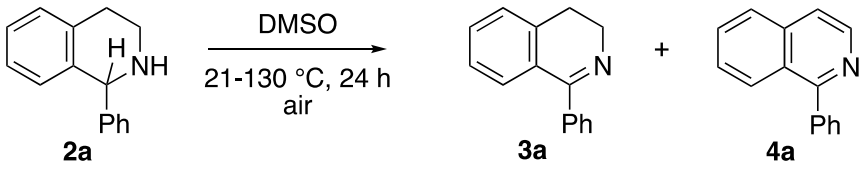


2a **3a** **4a**

Table S1. Time study. Reaction of 1-phenyl-1,2,3,4-tetrahydroisoquinoline **2a** (100 mg, 0.48 mmol) in DMSO (3 mL), 100 °C, under air.

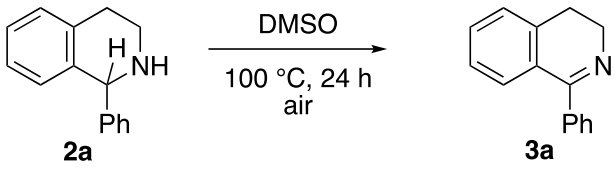
Entry	Time (h)	Product **2a:3a:4a** GC–MS Ratio (%)
1	6	81 : 18 : 0
2	12	47 : 52 : 0
3	18	1 : 88 : 11
4	24	0 : 97 : 3



2a **3a** **4a**

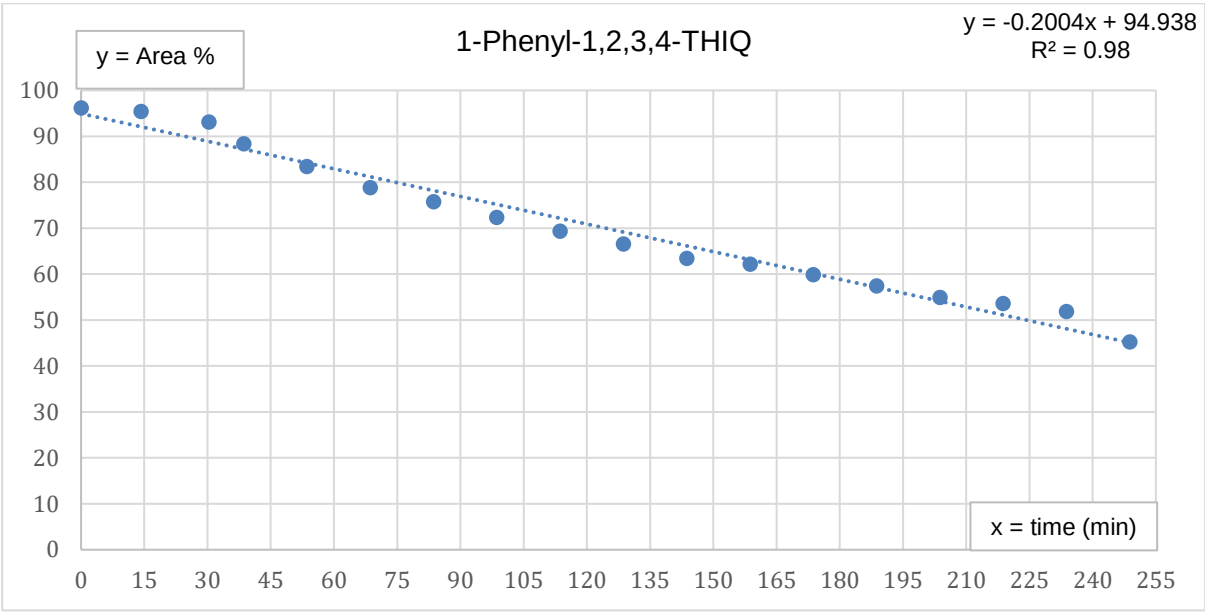
Table S2. Temperature study. Reaction of 1-phenyl-1,2,3,4-tetrahydroisoquinoline **2a** (100 mg, 0.48 mmol) in DMSO (3 mL), 24 h, under air.

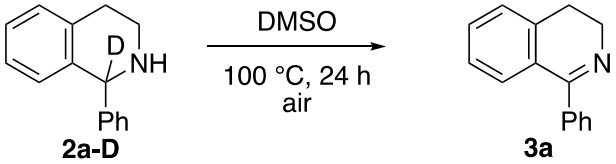
Entry	Temperature (°C)	Product **2a:3a:4a** GC-MS Ratio (%)
1	21	100 : 0 : 0
2	70	99: < 1 : 0
3	80	5 : 95 : 0
4	100	0 : 97 : 3



2a **3a**

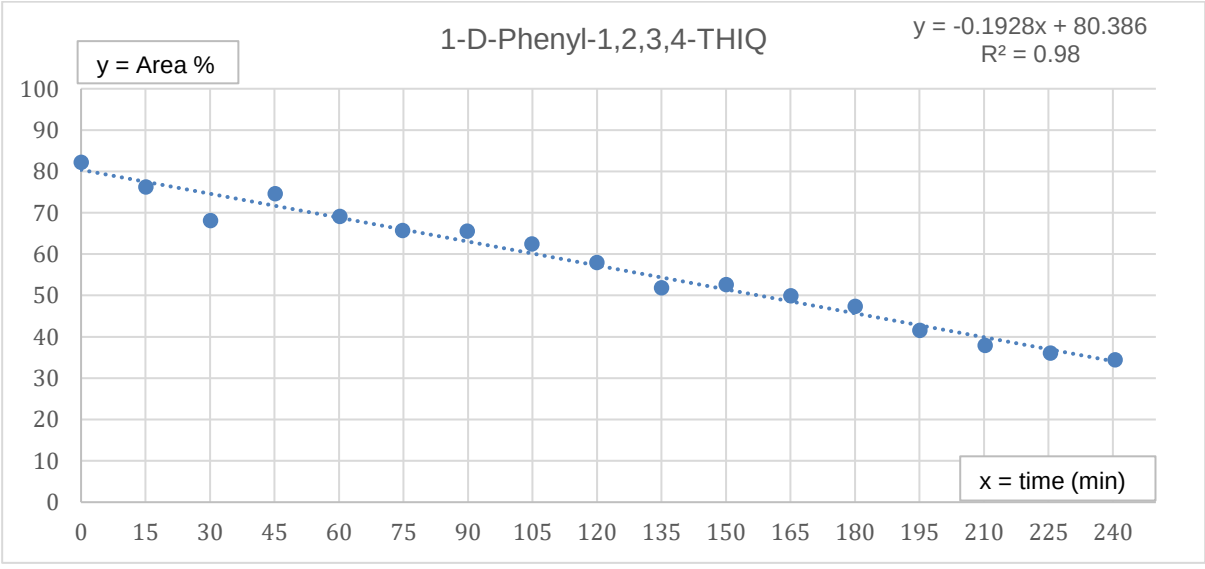
Figure S1. Disappearance of **2a** followed by LC–MS. R^2 is the goodness of fit.





2a-D **3a**

Figure S2. Disappearance of deuterated **2a-D** followed by LC–MS. R^2 is the goodness of fit.



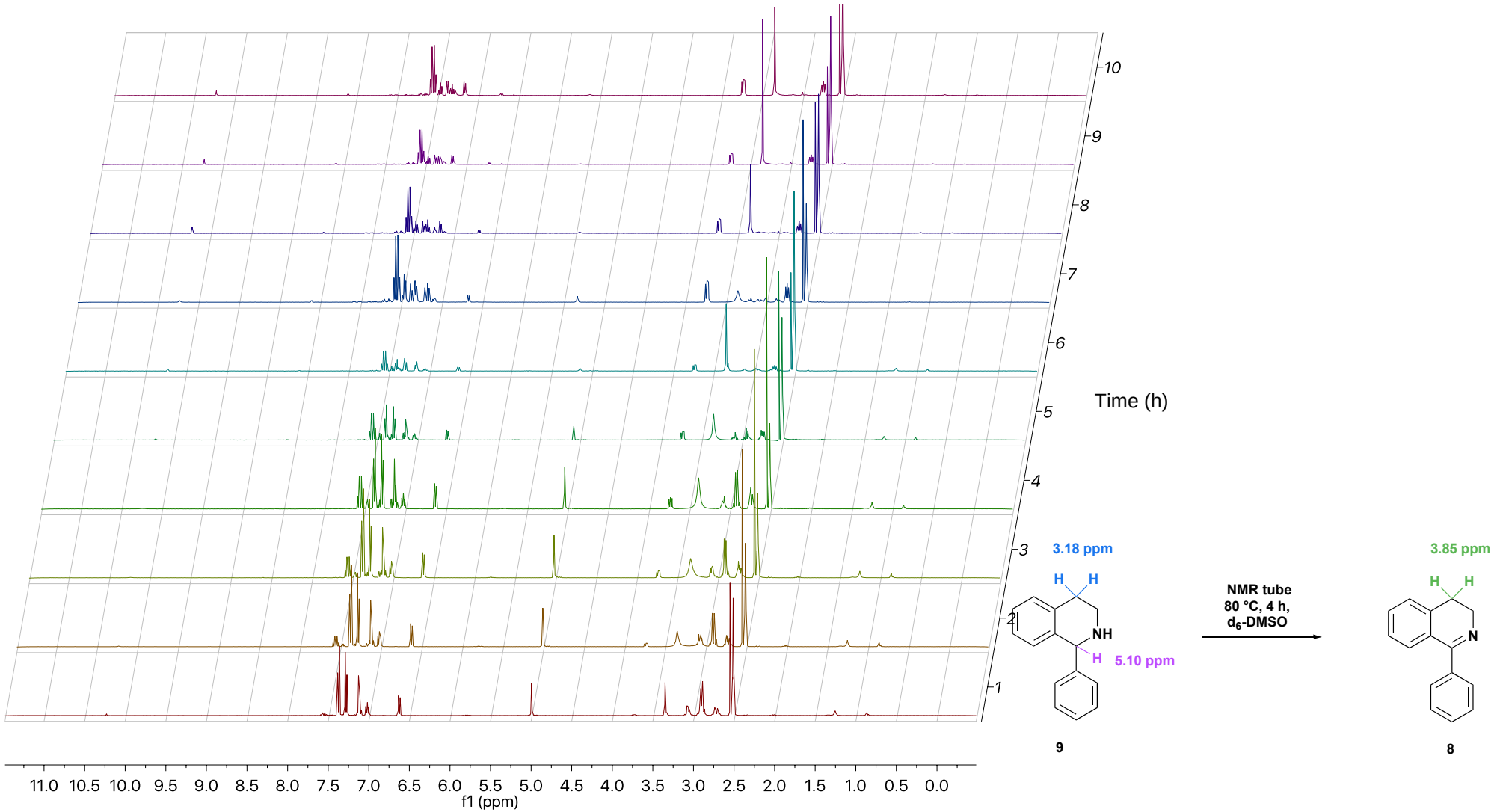


Figure S3. 1-Phenyl-1,2,3,4-tetrahydroisoquinoline **2a** in DMSO-d_6 heated in an NMR tube at 80 °C directly in the NMR instrument. Spectra were run every 30 min (y-axis). Signals due to H-1 (~δ 5.1) and H-4 (~δ 3.2) in the starting material **2a** and H-4 (~δ 3.8) in product **3a**. The increasing signal at 3.3 ppm is likely attributable to water.