

Supporting Information to:

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**Spontaneous Mirror Symmetry Breaking: An Entropy Production Survey of the Racemate Instability and the Emergence of Stable Scalemic Stationary States**

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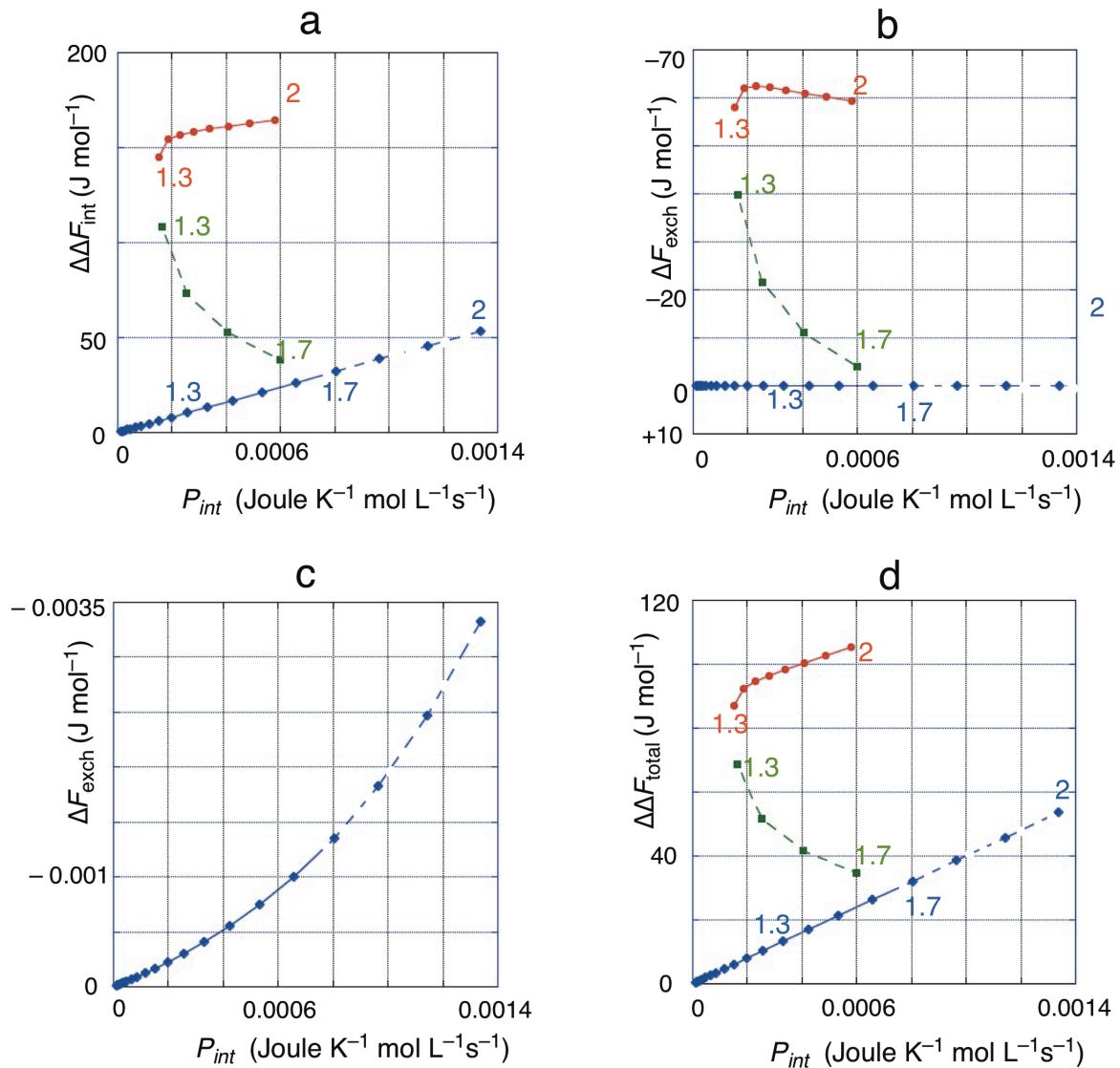
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Table S1. Concentrations and *ee* values for all NESSs of the system of Scheme in the autocatalytic range (b) 0 – 2.

n	Racemic				Instable Scalemic (D)				Stable Scalemic (D)			
	[A] (mol L <sup>-1</sup> )	[D] (mol L <sup>-1</sup> )	[L] (mol L <sup>-1</sup> )	ee (%)	[A] (mol L <sup>-1</sup> )	[D] (mol L <sup>-1</sup> )	[L] (mol L <sup>-1</sup> )	ee (%)	[A] (mol L <sup>-1</sup> )	[D] (mol L <sup>-1</sup> )	[L] (mol L <sup>-1</sup> )	ee (%)
Thermodynamic Equilibrium	4.9997 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0	5.05 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.1	5.07 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.2	5.09 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.3	5.12 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.4	5.17 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.5	5.22 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.6	5.30 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.7	5.41 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.8	5.55 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
0.9	5.74 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
1	6.0 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
1.1	6.49 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
1.2	6.82 10 <sup>-6</sup>	4.9997 10 <sup>-2</sup>	4.9997 10 <sup>-2</sup>	0								
1.3	7.46 10 <sup>-6</sup>	4.9996 10 <sup>-2</sup>	4.9996 10 <sup>-2</sup>	0	1.197 10 <sup>-5</sup>	9.978 10 <sup>-2</sup>	2.11 10 <sup>-4</sup>	99.569	1.199 10 <sup>-5</sup>	9.996 10 <sup>-2</sup>	2.351 10 <sup>-5</sup>	99.953
1.4	8.31 10 <sup>-6</sup>	4.9996 10 <sup>-2</sup>	4.9996 10 <sup>-2</sup>	0	1.233 10 <sup>-5</sup>	9.807 10 <sup>-2</sup>	1.91 10 <sup>-3</sup>	96,179	1.251 10 <sup>-5</sup>	9.997 10 <sup>-2</sup>	1.464 10 <sup>-5</sup>	99.971
1.5	9.47 10 <sup>-6</sup>	4.9995 10 <sup>-2</sup>	4.9995 10 <sup>-2</sup>	0	1.257 10 <sup>-5</sup>	9.291 10 <sup>-2</sup>	7.08 10 <sup>-3</sup>	85,836	1.312 10 <sup>-5</sup>	9.997 10 <sup>-2</sup>	1.384 10 <sup>-5</sup>	99.972
1.6	1.10 10 <sup>-5</sup>	4.9994 10 <sup>-2</sup>	4.9994 10 <sup>-2</sup>	0	1.259 10 <sup>-5</sup>	8.063 10 <sup>-2</sup>	1.94 10 <sup>-2</sup>	61.212	1.398 10 <sup>-5</sup>	9,997 10 <sup>-2</sup>	1.422 10 <sup>-5</sup>	99.972
1.7	1.31 10 <sup>-5</sup>	4.9993 10 <sup>-2</sup>	4.9993 10 <sup>-3</sup>						1.501 10 <sup>-5</sup>	9.997 10 <sup>-2</sup>	1.510 10 <sup>-5</sup>	99.970
1.8	1.60 10 <sup>-5</sup>	4.9992 10 <sup>-2</sup>	4.9992 10 <sup>-2</sup>	0					1.631 10 <sup>-5</sup>	9.997 10 <sup>-2</sup>	1.635 10 <sup>-5</sup>	99.967
1.9	1.98 10 <sup>-5</sup>	4.9990 10 <sup>-2</sup>	4.9990 10 <sup>-2</sup>	0					1.794 10 <sup>-5</sup>	9.996 10 <sup>-2</sup>	1.796 10 <sup>-5</sup>	99.964
2	2.50 10 <sup>-5</sup>	4.9987 10 <sup>-2</sup>	4.9987 10 <sup>-2</sup>	0					2.000 10 <sup>-5</sup>	9.996 10 <sup>-2</sup>	2.000 10 <sup>-5</sup>	99.960



**Figure S1.** Relationship between  $\Delta\Delta F_{int}$ ,  $\Delta F_{exch}$  and their sum ( $\Delta\Delta F_{total}$ ) to  $P_{int}$ . Fig. S1c is an amplification of Fig. S1b. Blue dots, racemic NESSs (stable for  $n \leq 1.6$ , unstable for  $n \geq 1.7$ ); Green dots, unstable scalemic NESSs; Red dots, stable scalemic NESSs. The relationship of  $\Delta\Delta F_{int}$  and  $\Delta F_{exch}$  with  $P_{int}$  ( $-P_{exch}$ ) is linear for the racemic NESS (thermodynamic branch) and probably also linear for the stable scalemic NESSs in the SMSB region ( $1.7 \leq n \leq 2$ ).