

Table S1.

Pressure dependence of the observed first order rate constants at 19.5 °C for the self-decomposition of 0.35 mM peroxyxynitrite in 0.15 M phosphate-buffered solutions, pH 4.5, containing 52 μM or 5 mM nitrite ion.

52 μM NO_2^-		5 mM NO_2^-	
Pressure (MPa)	k (s^{-1})	Pressure (MPa)	k (s^{-1})
0.1	0.79	0.1	0.81
0.1	0.78	0.1	0.80
0.1	0.81	0.1	0.85
0.1	0.84	0.1	0.83
25	0.78	25	0.65
25	0.76	25	0.68
25	0.83	25	0.62
25	0.75	25	0.70
50	0.65	50	0.58
50	0.68	50	0.53
50	0.74	50	0.58
50	0.73	50	0.57
75	0.65	75	0.55
75	0.71	75	0.51
75	0.63	75	0.45
75	0.68	75	0.57
100	0.62	100	0.45
100	0.65	100	0.48
100	0.63	100	0.41
100	0.67	100	0.44

Table S2.

Pressure dependence of the observed first order rate constants for the reactions between 0.50 mM peroxyxynitrite and 5.0 mM Mo(CN)_8^{4-} at 21 °C or Fe(CN)_6^{4-} at 25 °C in 0.15 M phosphate-buffered solutions, pH 7.2.

Fe(CN)_6^{4-}			Mo(CN)_8^{4-}		
Pressure (MPa)	k (s ⁻¹)	ΔAbs/cm	Pressure (MPa)	k (s ⁻¹)	ΔAbs/cm
0.1	0.35	0.39	0.1	0.25	0.36
0.1	0.33	0.40	0.1	0.26	0.34
0.1	0.36	0.38	0.1	0.26	0.39
5	0.32	0.37	6	0.27	0.28
5	0.33	0.38	15	0.28	0.31
12	0.30	0.29	16	0.25	0.30
19	0.29	0.34	16	0.27	0.30
25	0.34	0.36	20	0.24	0.30
30	0.32	0.29	22	0.20	0.32
31	0.30	0.25	32	0.24	0.34
38	0.26	0.30	38	0.25	0.29
39	0.26	0.34	40	0.21	0.30
58	0.25	0.29	40	0.24	0.27
61	0.25	0.34	40	0.23	0.31
70	0.27	0.32	40	0.24	0.31
75	0.21	0.35	62	0.18	0.23
90	0.25	0.35	62	0.19	0.26
90	0.21	0.35	62	0.17	0.27
91	0.22	0.25	75	0.22	0.25
93	0.20	0.26	80	0.19	0.20
103	0.21	0.23	80	0.16	0.24
110	0.22	0.25	80	0.16	0.25
138	0.19	0.27	104	0.18	0.21
140	0.19	0.20	104	0.18	0.22
			120	0.18	0.20
			145	0.14	0.18

Table S3.

Pressure dependence of the observed first order rate constants for the reactions of 0.5 mM $\text{Fe}(\text{CN})_6^{4-}$ with peroxynitrite in 0.15 M phosphate-buffered solutions that either contained 6 mM bicarbonate (0.3 mM peroxynitrite, pH 7.2, 25 °C) or were bicarbonate-free (0.5 mM peroxynitrite, pH 4.5, 20 °C).

6 mM HCO_3^-			HCO_3^- -free		
Pressure (MPa)	k (s^{-1})	$\Delta\text{Abs}/\text{cm}$	Pressure (MPa)	k (s^{-1})	$\Delta\text{Abs}/\text{cm}$
0.1	5.9	0.21	0.1	0.77	0.32
0.1	6.0	0.2	0.1	0.78	0.33
0.1	6.0	0.24	0.1	0.79	0.33
8	6.0	0.16	0.1	0.81	0.34
8	5.4	0.19	25	0.75	0.32
23	8.1	0.15	25	0.65	0.31
23	5.6	0.11	25	0.74	0.29
34	7.1	0.12	25	0.69	0.26
36	10.4	0.20	50	0.61	0.25
38	8.5	0.16	50	0.65	0.31
38	8.5	0.17	50	0.59	0.26
52	10.5	0.19	50	0.63	0.27
52	8.6	0.12	75	0.55	0.22
62	8.4	0.13	75	0.58	0.25
62	9.2	0.15	75	0.52	0.24
62	7.9	0.16	75	0.49	0.25
62	8.0	0.21	125	0.47	0.22
82	17.2	0.11	125	0.43	0.21
82	10.0	0.13	125	0.41	0.19
82	12.1	0.10	125	0.39	0.24

Table S4.

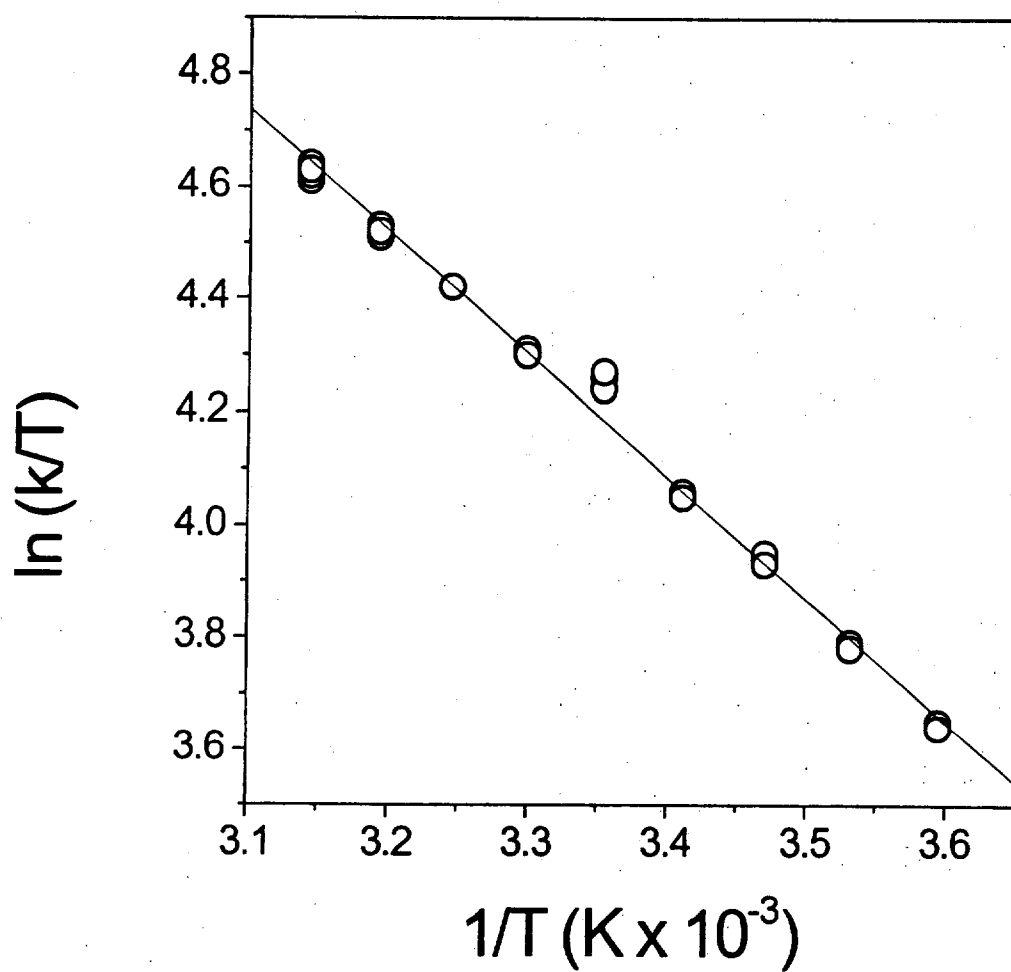
Pressure dependence at 20 °C and temperature dependence at atmospheric pressure of the observed first order rate constant for reaction between 1.0 mM Ni(cyclam)²⁺ and 70 μM peroxynitrite in 0.15 M phosphate-buffered solutions, pH 7.2.

Pressure (MPa)	k (s ⁻¹)	T(K)	k (s ⁻¹)	T(K)	k (s ⁻¹)
0	17	278	11	313	29
0	17	278	11	318	32
0	17	278	11	318	33
0	17	278	11	318	32
25	17	283	13	318	33
25	16	283	12		
25	16	283	13		
25	18	283	12		
50	19	288	15		
50	19	288	15		
50	18	288	15		
75	17	288	15		
75	17	293	17		
75	18	293	17		
75	17	293	17		
75	17	293	17		
100	19	298	21		
100	26	298	21		
100	27	298	21		
100	23	298	21		
100	23	303	23		
		303	22		
		303	22		
		303	22		
		303	22		
		308	26		
		308	26		
		308	26		
		308	26		
		313	29		
		313	29		
		313	29		

Captions for Supplementary Figures

Figure S1. Temperature dependence of the reaction between 1.0 mM Ni(cyclam)²⁺ and 70 μM peroxyxynitrite in 0.15 M phosphate, pH 7.2. The fit line is the result of linear least squares analysis.

Figure S2. Pressure dependence of the yield of Fe(CN)₆³⁻ from the reaction between 5.0 mM Fe(CN)₆⁴⁻ and 0.3 mM peroxyxynitrite in 0.15 M phosphate containing 6.0 mM bicarbonate at pH 7.2 and 25 °C. Yields are expressed relative to the initial amount of peroxyxynitrite. The fit line is the result of linear least squares analysis.



56
Figure S1
J. W. Coddington, et al.

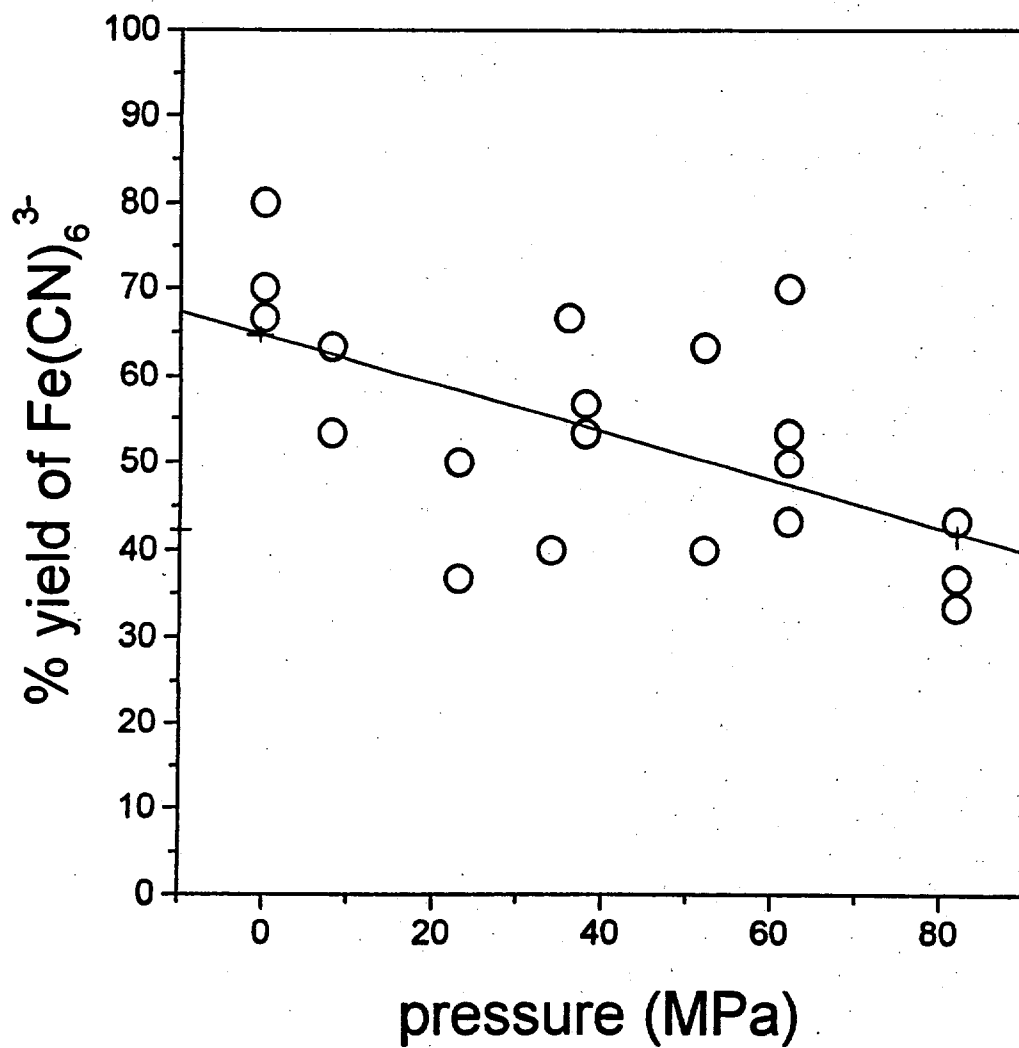


Figure S2
J. W. Coddington, et al.

S7