Supporting information for

Temperature cycling induced deracemization (TCID) of $NaClO_3$ under the influence of $Na_2S_2O_6$

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SI-I: Determination of the solubility curve of the $NaClO_3$ in water realized by refractometry method.

After the establishment of a calibration curve (plotted with nine solutions of known concentrations of $NaClO_3$ in water, Figure), the refractive index of saturated solutions of $NaClO_3$ in water at different temperature was measured and plotted to determine the solubility curve between 20 and 40°C.

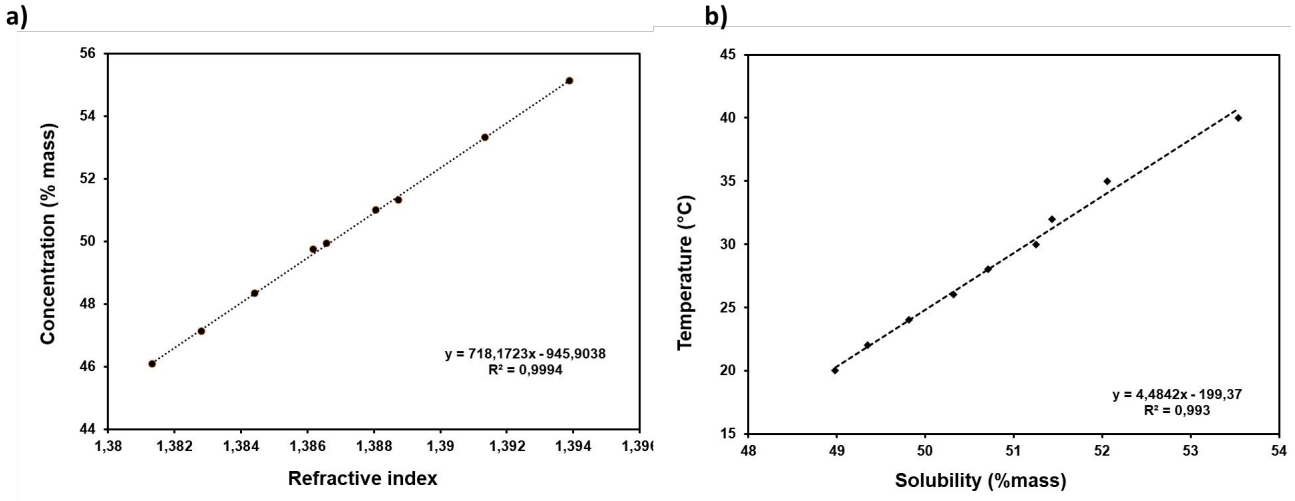

Figure I: a) Calibration curve of the refractive index as a function of the mass concentration of $NaClO_3$ in water. b) Solubility curve of $NaClO_3$ in water between 20 and 40°C.

SI-II: Log(ee) as a function of the time for Viedma ripening and TCID experiments (Figue II). Table I details the linear regressions of the curves.

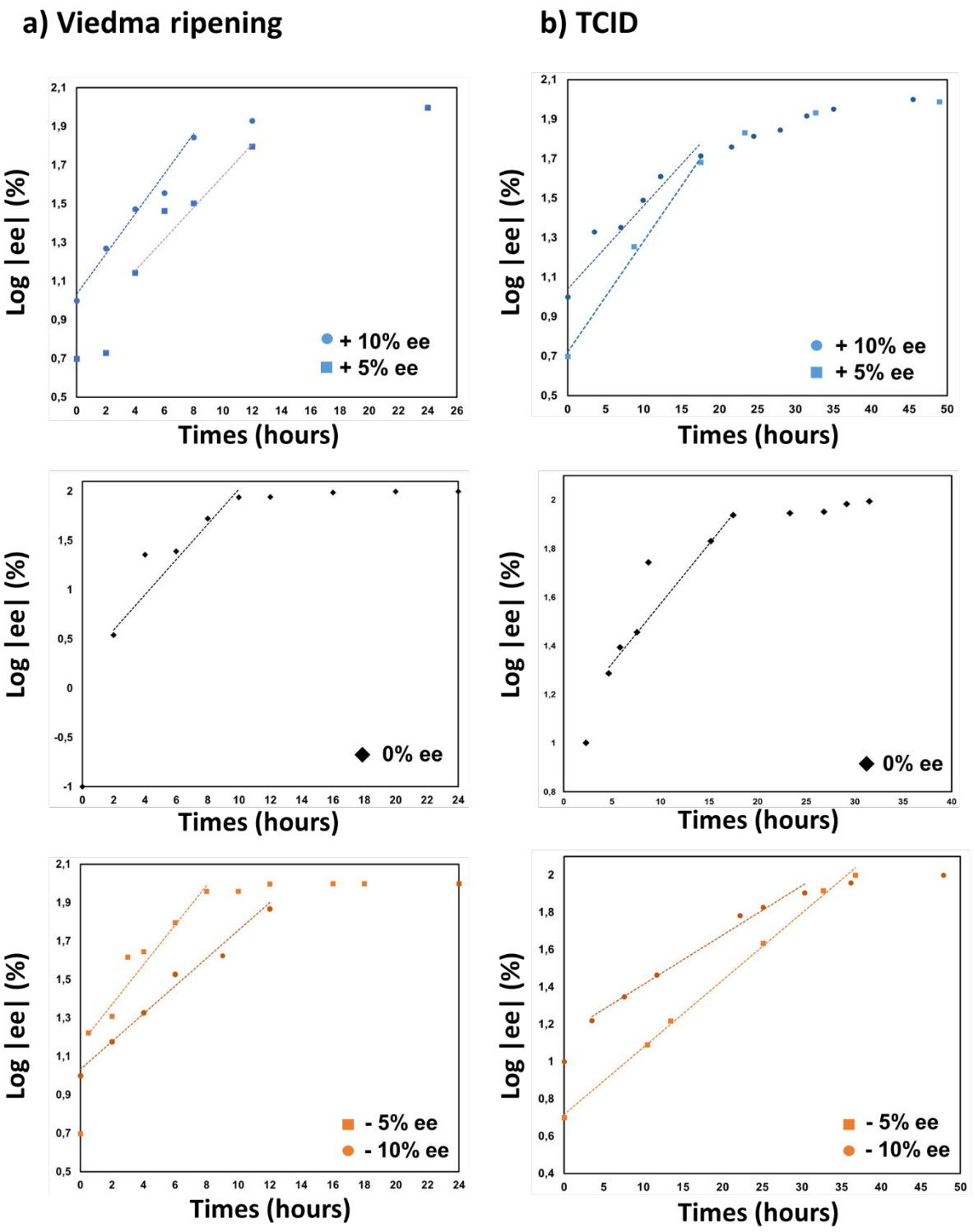

Figure II: Evolution of the log |ee|(%) as a function of the time of a) VR experiments and b) TCID experiments. The line is the linear regression, detailed in table I. Inlay indicates the starting $ee_{crystal}$.

Table I: Summary of linear regressions of the VR deracemization experiments (left) and TCID deracemization experiments (right)

	Viedma Ripening		TCID	
ee initial	Linear regression	r^2	Linear regression	r^2
- 10%	Log |ee| = 0.0722 * *t* + 1.0329	0.9869	Log |ee| = 0.0265 * *t* + 1.148	0.9875
- 5%	Log |ee| = 0.1035 * *t* + 1.1621	0.9757	Log |ee| = 0.036 * *t* + 0.7159	0.9977
0%	Log |ee| = 0.1786* *t* + 0.2383	0.9823	Log |ee| = 0.0492 * *t* + 1.0821	0.9960
5%	Log |ee| = 0.0815 * *t* + 0.8291	0.9967	Log |ee| = 0.0561 * *t* + 0.7207	0.9942
10%	Log |ee| = 0.0986 * *t* + 1.0338	0.98039	Log |ee| = 0.0421 * *t* +1.0401	0.9684

SI-III: Log(ee) as a function of the time for TCID experiments in presence of $Na_2S_2O_6$ (Figue III) and details of the linear regressions of those curves (Table II).

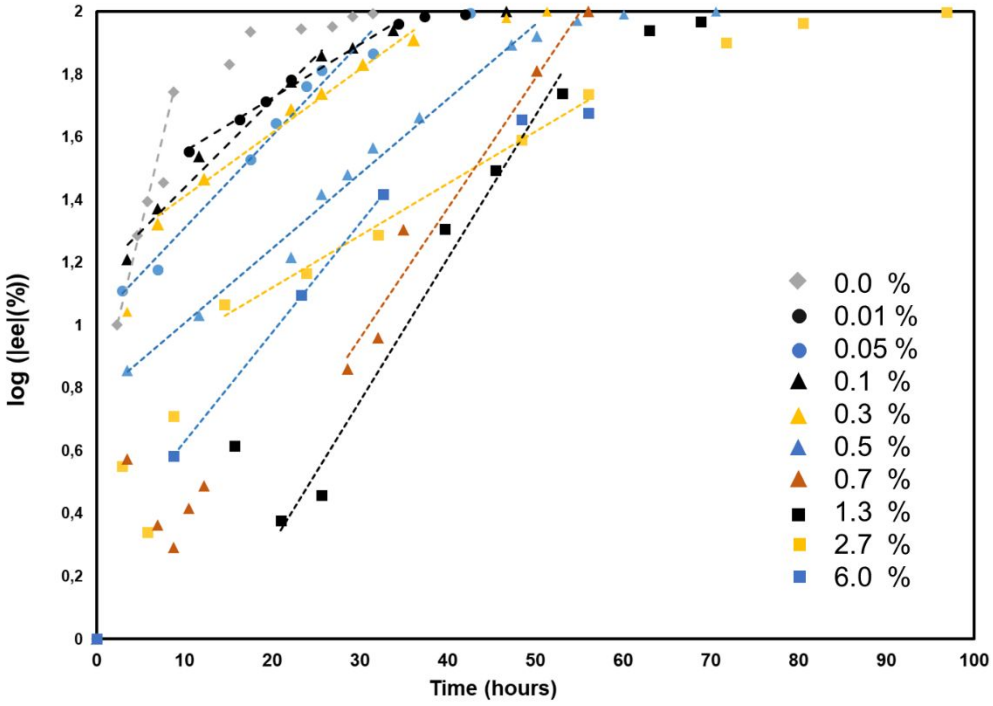

Figure III: Evolution of the log |ee|(%) as a function of the time of TCID experiments in presence of $Na_2S_2O_6$. The line is the linear regression, detailed in table II. Inlay indicates the starting %mol of $Na_2S_2O_6$.

Table II: Summary of linear regressions of the VR deracemization experiments (left) and TCID deracemization experiments (right)

%mol $Na_2S_2O_6$	Linear regression	r^2
0%	Log |ee| = 0.0492 * *t* + 1.0821	0.9960
0.01%	Log |ee| = 0.0171 * *t* + 1.3838	0.9922
0.05%	Log |ee| = 0.0294 * *t* + 1.0169	0.9778
0.1%	Log |ee| = 0.028 * *t* + 1.1585	0.9812
0.3%	Log |ee| = 0.0203 * *t* + 1.2091	0.9884
0.5%	Log |ee| = 0.0238 * *t* + 0.7698	0.9877
0.7%	Log |ee| = 0.0414 * *t* - 0.2851	0.9711
1.3%	Log |ee| = 0.0457 * *t* + 0.6135	0.9813
2%	Log |ee| = 0.0166 * *t* + 0.7897	0.9905
6%	Log |ee| = 0.0349 * *t* + 0.2783	0.9999

SI-IV: Study of the speed of surface development of a single crystal of $NaClO_3$ during crystal growth experiments.

Gs, defined by the Equation I, where A_{final} and $A_{initial}$ are the area of the single crystals at the beginning and at the end of the cooling profile (**Error! Reference source not found.**), and t, the time required to cool from 40 to 26 °C (i.e., 15 min).

$$Gs = \frac{(A_{final} - A_{initial})}{t} \quad \textit{Equation I}$$

Table III: Growth rate of $NaClO_3$ crystals during growth rate experiments in contaminated saturated solution as a function of the %mol of $Na_2S_2O_6$

%mol $Na_2S_2O_6$	Area inital (µm²)	Area Final (µm²)	Growth (µm²/min)
0	*3573132*	5527192	***130271***
0.1	*3830786*	4355030	***34950***
0.5	*2491196*	2831494	***22687***
2	*4907637*	5638282	***48710***