Supplementary information

Evaluation of Novel Multifunction Polymeric Schiff Bases as Anticorrosive Agents for the Medical Grade 316L Stainless Steel

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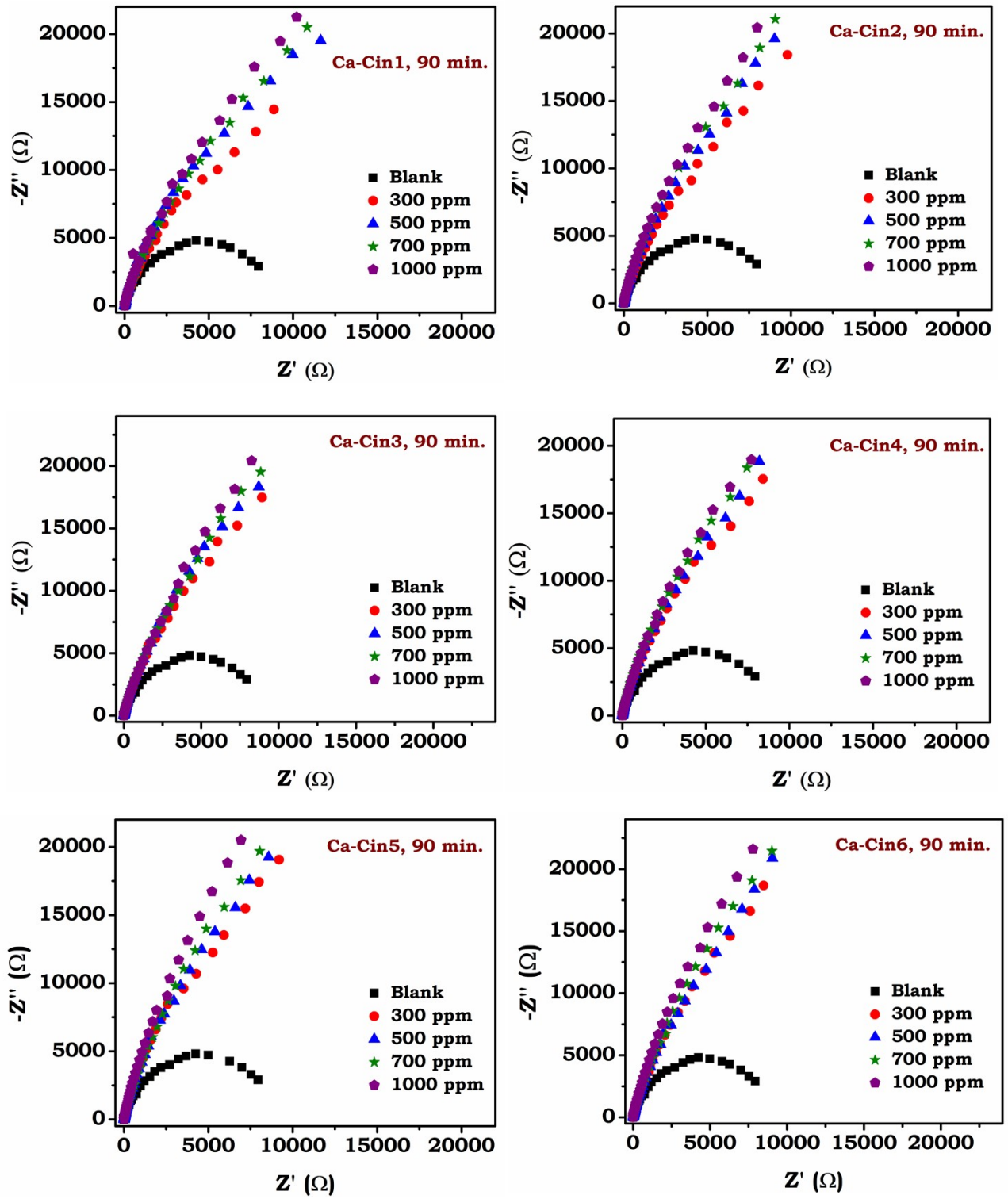

Figure 1S: Nyquist graphs in SBF of blank and immersed SS specimens for 90 min. in various Schiff base solutions of different concentrations.

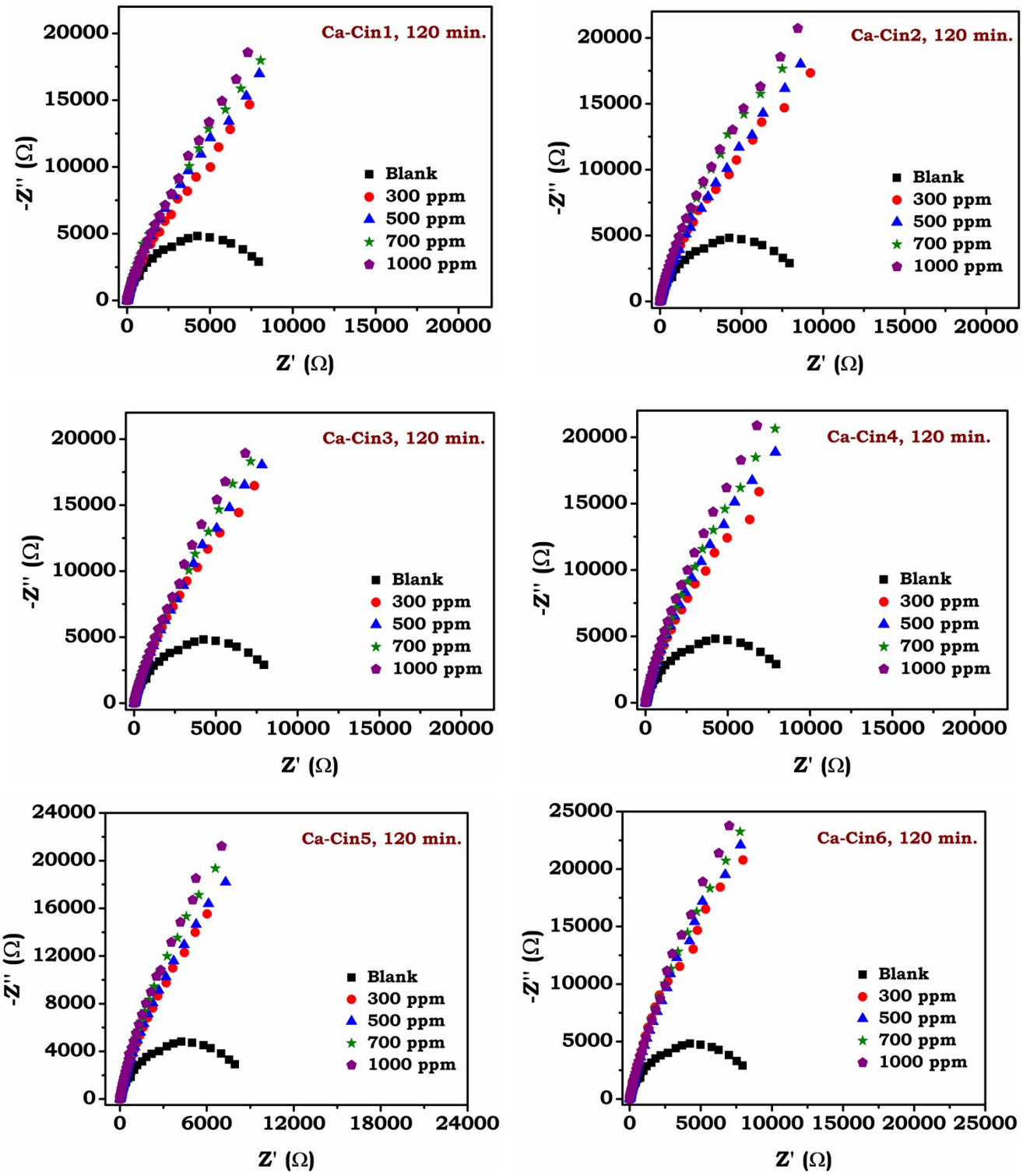

Figure 2S: Nyquist graphs in SBF of blank and immersed SS specimens for 120 min. in various Schiff base solutions of different concentrations.

Table 1S: Fitted EIS parameters at 37 ± 0.2°C in SBF solution of blank and immersed SS specimens for 90 min. in various Schiff base solutions of different concentrations.

Schiff base	Conc. (ppm)	R_s (Ω)	*CPE*		R_{ct} (kΩ)	W (μMho)	η%
			Y_{dl}(μMho)	*n*			
Blank	0	7.54	82.7	0.886	11.5	92.1	---
Ca-Cin1	300	10.9	85.1	0.881	38.8	---	70.36
	500	10.0	61.6	0.912	50.4		77.18
	700	15.7	60.0	0.888	64.0		82.03
	1000	11.9	57.2	0.896	68.7		83.26
Ca- Cin2	300	10.3	69.6	0.892	49.1	---	76.58
	500	12.4	68.2	0.904	61.0		81.15
	700	11.3	66.7	0.916	67.7		83.01
	1000	9.74	65.7	0.908	74.4		84.54
Ca-Cin3	300	9.69	75.1	0.901	52.5		78.10
	500	10.9	70.8	0.907	57.2		79.90
	700	12.8	61.1	0.893	70.4		83.66
	1000	10.7	60.8	0.885	80.3		85.68
Ca-Cin4	300	10.1	73.9	0.912	55.2	---	79.17
	500	10.3	72.1	0.913	60.9		81.12
	700	9.30	73.1	0.905	73.4		84.33
	1000	11.7	71.0	0.893	90.4		87.28
Ca-Cin5	300	8.66	70.9	0.911	66.2	---	82.63
	500	10.9	68.8	0.900	69.7		83.50
	700	12.1	66.2	0.897	86.8		86.75
	1000	8.80	65.9	0.901	96.6		88.10
Ca-Cin6	300	9.42	71.1	0.889	67.9	---	83.06
	500	12.2	65.7	0.883	70.9		83.78
	700	12.0	62.3	0.883	95.0		87.90
	1000	9.04	69.6	0.902	122		90.57

Table 2S: Fitted EIS parameters at 37 ± 0.2°C in SBF solution of blank and immersed SS specimens for 120 min. in various Schiff base solutions of different concentrations.

Schiff base	Conc. (ppm)	R_s (Ω)	*CPE*		R_{ct} (kΩ)	W (μMho)	η%
			Y_{dl}(μMho)	*n*			
Blank	0	7.54	82.7	0.886	11.5	92.1	---
Ca-Cin1	300	8.57	86.0	0.885	39.4	---	70.81
	500	12.3	75.4	0.899	55.4		79.24
	700	11.5	73.9	0.905	59.8		80.77
	1000	5.97	74.7	0.878	72.6		84.16
Ca-Cin2	300	9.58	76.1	0.894	51.1	---	77.50
	500	13.2	65.2	0.880	60.2		80.90
	700	11.0	67.5	0.928	64.3		82.16
	1000	9.63	67.0	0.905	85.3		86.52
Ca-Cin3	300	10.6	81.0	0.901	57.8	---	80.10
	500	8.85	76.3	0.885	69.1		83.36
	700	9.02	75.8	0.905	74.1		84.48
	1000	10.8	75.0	0.885	90.6		87.31
Ca-Cin4	300	11.3	86.3	0.899	62.6	---	81.63
	500	10.7	72.8	0.896	82.4		86.04
	700	11.8	67.0	0.892	108		89.35
	1000	7.35	68.6	0.899	122		90.57
Ca-Cin5	300	10.7	87.0	0.906	69.9	---	83.55
	500	13.7	75.4	0.898	89.9		87.201
	700	7.98	74.1	0.90	117		90.17
	1000	14.2	68.2	0.908	125		90.80
Ca-Cin6	300	9.35	60.5	0.893	113	---	89.82
	500	10.5	63.4	0.890	125		90.80
	700	11.1	61.3	0.902	137		91.61
	1000	11.7	55.0	0.896	141		91.84