

Inhibitory of new synthesized 3-BrPhOXTson corrosion of stainless steel in acidic medium

Ali Ehsani^{a*}, Reza Moshrefi^b, Ahmad Khodadadi^c and Ali Yeganeh-Faal^c

^a *Department of Chemistry, Faculty of science, University of Qom, Qom, Iran*

^b *Department of Chemistry, Faculty of science, K. N. Toosi University of Technology , Tehran, Iran*

^c *Department of Chemistry, Payame Noor University, Tehran, Iran*

Electronic Supplementary Information

Table S1:	data for Figure 2
Figure S1 – S3:	IR and NMR of 3-BrPhOXTs

Table S1: Nyquist plots data of SS in 0.5 M H₂SO₄ solution containing different concentrations of the 3-BrPhOXTs.

SS ₁		SS ₂		SS ₃		SS ₄		SS ₅	
Z _{real}	Z _{im}	Z _{real}	Z _{im}	Z _{real}	Z _{im}	Z _{real}	Z _{im}	Z _{real}	Z _{im}
1.92E+05	5.88E+04	2.86E+05	1.77E+05	4.91E+00	3.94E-01	4.38E+00	4.28E-01	1.00E+01	1.16E+00
1.58E+05	6.77E+04	2.17E+05	1.57E+05	5.02E+00	8.52E-01	4.49E+00	9.08E-01	1.02E+01	1.70E+00
1.26E+05	6.82E+04	1.58E+05	1.41E+05	5.14E+00	1.40E+00	4.61E+00	1.50E+00	1.04E+01	2.48E+00
9.82E+04	6.55E+04	1.09E+05	1.22E+05	5.31E+00	2.15E+00	4.79E+00	2.31E+00	1.07E+01	3.63E+00
7.26E+04	6.15E+04	7.05E+04	9.92E+04	5.53E+00	3.24E+00	5.03E+00	3.50E+00	1.11E+01	5.35E+00
5.02E+04	5.42E+04	4.34E+04	7.77E+04	5.85E+00	4.88E+00	5.38E+00	5.26E+00	1.16E+01	7.98E+00
3.25E+04	4.48E+04	2.55E+04	5.73E+04	6.34E+00	7.33E+00	5.92E+00	7.89E+00	1.24E+01	1.19E+01
2.01E+04	3.40E+04	1.52E+04	4.08E+04	7.10E+00	1.10E+01	6.75E+00	1.18E+01	1.37E+01	1.78E+01
1.21E+04	2.52E+04	9.06E+03	2.81E+04	8.23E+00	1.65E+01	8.04E+00	1.76E+01	1.55E+01	2.65E+01
7.19E+03	1.80E+04	5.36E+03	1.92E+04	9.98E+00	2.46E+01	9.98E+00	2.63E+01	1.81E+01	3.97E+01
4.37E+03	1.26E+04	3.28E+03	1.30E+04	1.28E+01	3.67E+01	1.29E+01	3.90E+01	2.22E+01	5.93E+01
2.71E+03	8.65E+03	1.99E+03	8.68E+03	1.66E+01	5.50E+01	1.69E+01	5.83E+01	2.81E+01	8.84E+01
1.68E+03	5.90E+03	1.29E+03	5.87E+03	2.26E+01	8.19E+01	2.31E+01	8.68E+01	3.68E+01	1.32E+02
1.10E+03	3.99E+03	8.49E+02	3.91E+03	3.18E+01	1.22E+02	3.25E+01	1.29E+02	4.95E+01	1.98E+02
7.04E+02	2.70E+03	5.71E+02	2.61E+03	4.54E+01	1.81E+02	4.61E+01	1.93E+02	6.96E+01	2.93E+02
4.66E+02	1.84E+03	3.86E+02	1.74E+03	6.48E+01	2.66E+02	6.71E+01	2.86E+02	9.90E+01	4.46E+02
3.06E+02	1.25E+03	2.65E+02	1.17E+03	9.59E+01	3.98E+02	9.89E+01	4.27E+02	1.39E+02	6.70E+02
2.16E+02	8.88E+02	1.88E+02	7.80E+02	1.38E+02	5.95E+02	1.42E+02	6.39E+02	2.29E+02	1.13E+03
1.35E+02	5.65E+02	1.36E+02	5.25E+02	2.14E+02	9.37E+02	2.10E+02	9.51E+02	2.97E+02	1.50E+03
9.17E+01	3.80E+02	1.02E+02	3.54E+02	3.30E+02	1.45E+03	3.15E+02	1.41E+03	4.52E+02	2.26E+03
6.75E+01	2.62E+02	7.54E+01	2.33E+02	4.47E+02	1.96E+03	4.72E+02	2.11E+03	6.73E+02	3.40E+03
4.23E+01	1.71E+02	5.48E+01	1.66E+02	6.72E+02	2.91E+03	7.12E+02	3.12E+03	1.02E+03	5.11E+03
2.95E+01	1.14E+02	4.01E+01	1.15E+02	1.00E+03	4.36E+03	1.08E+03	4.65E+03	1.57E+03	7.69E+03
2.12E+01	7.66E+01	2.92E+01	7.95E+01	1.58E+03	6.46E+03	1.60E+03	6.92E+03	2.43E+03	1.15E+04
1.57E+01	5.13E+01	2.11E+01	5.48E+01	2.48E+03	9.55E+03	2.40E+03	1.03E+04	3.84E+03	1.71E+04
1.21E+01	3.42E+01	1.58E+01	3.74E+01	3.91E+03	1.40E+04	3.86E+03	1.53E+04	6.09E+03	2.55E+04
9.59E+00	2.29E+01	1.22E+01	2.55E+01	6.13E+03	2.05E+04	6.03E+03	2.25E+04	1.02E+04	3.75E+04
7.90E+00	1.54E+01	9.84E+00	1.73E+01	9.91E+03	2.98E+04	9.73E+03	3.31E+04	1.65E+04	5.47E+04
6.77E+00	1.03E+01	8.38E+00	1.17E+01	1.57E+04	4.31E+04	1.57E+04	4.82E+04	2.78E+04	8.02E+04
6.02E+00	6.87E+00	7.43E+00	7.86E+00	2.65E+04	6.19E+04	2.60E+04	6.98E+04	4.49E+04	1.08E+05
5.53E+00	4.57E+00	6.82E+00	5.29E+00	4.40E+04	8.68E+04	4.40E+04	9.91E+04	7.73E+04	1.57E+05
5.21E+00	3.03E+00	6.42E+00	3.56E+00	7.31E+04	1.16E+05	7.47E+04	1.36E+05	1.29E+05	2.19E+05
4.99E+00	2.00E+00	6.14E+00	2.40E+00	1.19E+05	1.52E+05	1.23E+05	1.80E+05	2.00E+05	2.81E+05
4.83E+00	1.29E+00	5.93E+00	1.61E+00	1.83E+05	1.91E+05	1.93E+05	2.27E+05	3.12E+05	3.64E+05

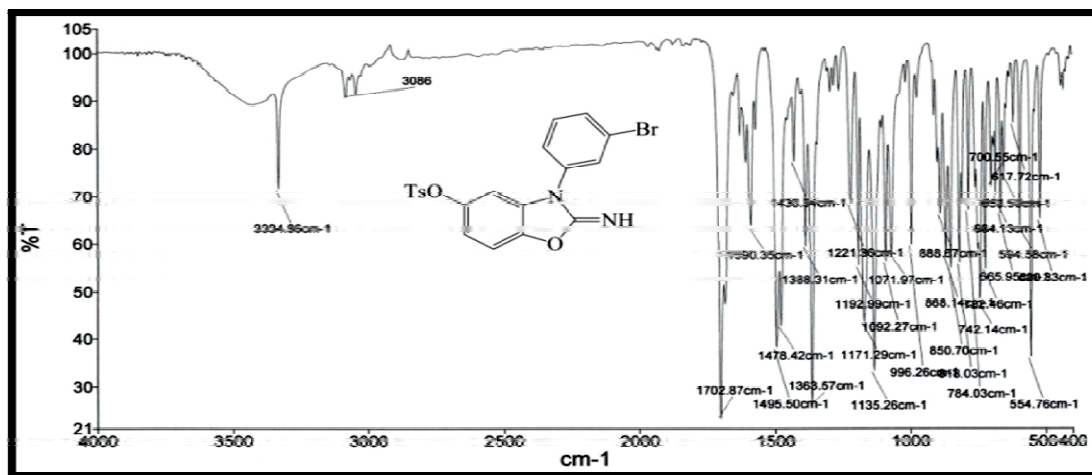


Figure S1. The FT-IR spectrum of 3-(3-bromophenyl)-2-imino-2,3-dihydrobenzo[d]oxazol-5-yl 4-methylbenzenesulfonate

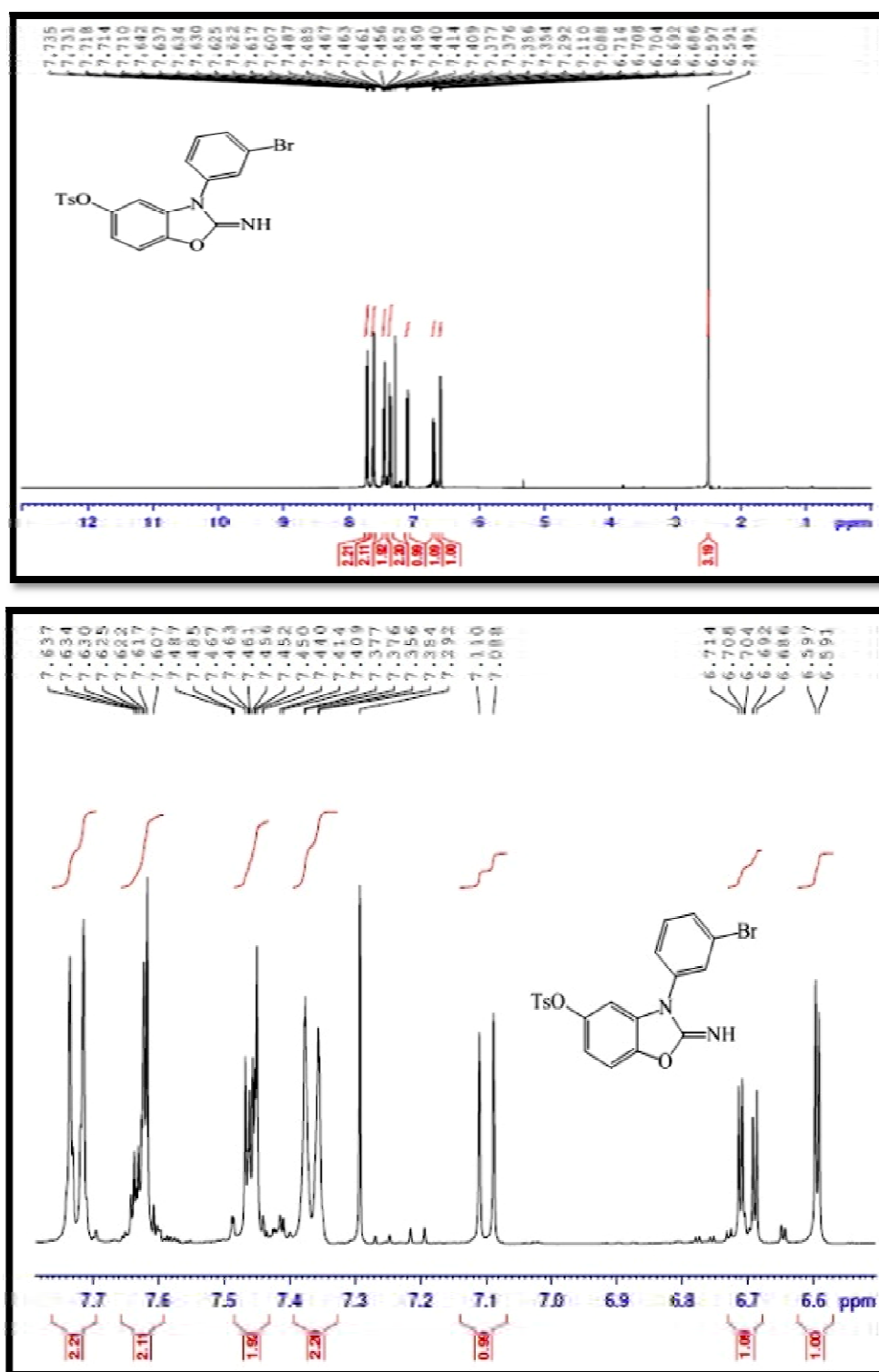


Figure S2. ¹H NMR spectrum (400 MHz, DMSO-*d*₆) of 3-(3-bromophenyl)-2-imino-2,3-dihydrobenzo[d]oxazol-5-yl 4-methylbenzenesulfonate

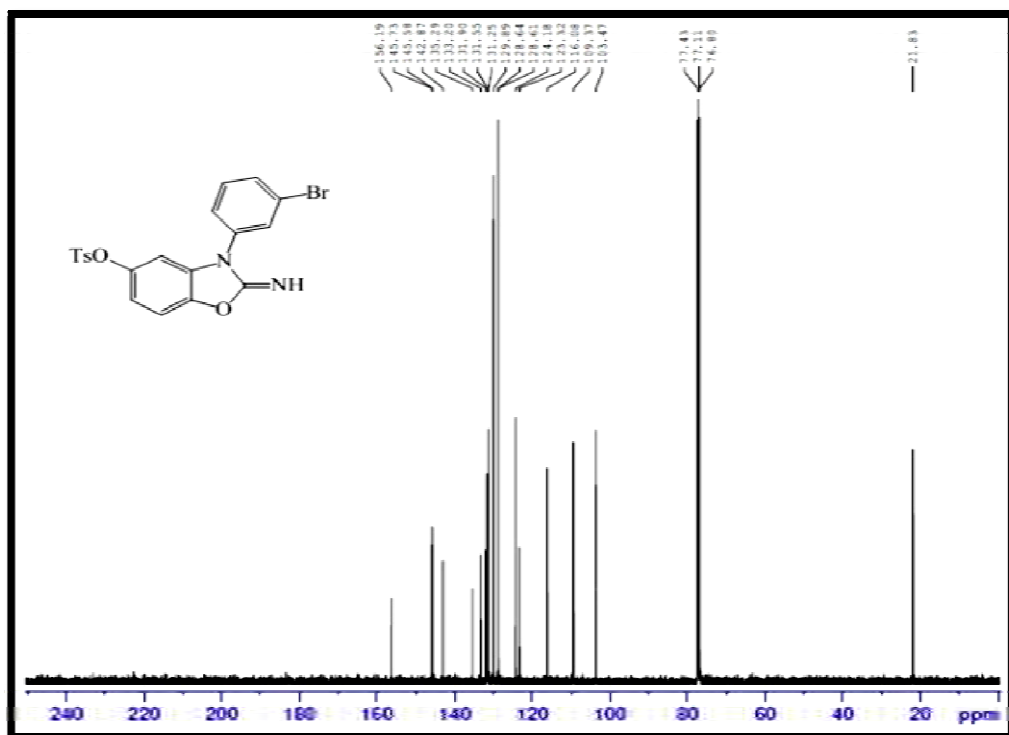


Figure S3. ¹³C NMR spectrum (100 MHz, DMSO-*d*₆) of 3-(3-bromophenyl)-2-imino-2,3-dihydrobenzo[*d*]oxazol-5-yl 4-methylbenzenesulfonate