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SUPPLEMENTARY MATERIAL TO
**Kinetic investigation of reactions of a 3-arylidene-2-thio-
hydantoin derivative with palladium(II) salts**

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3-((Phenylmethylene)amino)-2-thioxo-4-imidazolidinone (**3**). Yield 1.158 g (72 %). IR (KBr): 3419m, 3055m, 3032w, 2967m, 2768m, 1711s, 1645s, 1591s, 1490w, 1445w, 1409w, 1345m, 1327m, 1310m, 1249s, 1225m, 1213m, 1074w, 1039w, 969m, 877m, 854m, 835m, 788m, 756m, 734m, 713m 695m, 629w cm⁻¹. ¹H NMR (200 MHz, DMSO-*d*₆, δ): 8.40 (s, 1H), 7.75 (m, 2H), 7.45 (m, 3H), 3.89 (s, 2H). ¹³C NMR (50 MHz, DMSO-*d*₆, δ): 174.33, 165.51, 156.31, 134.31, 130.76, 128.96, 127.76, 33.26.

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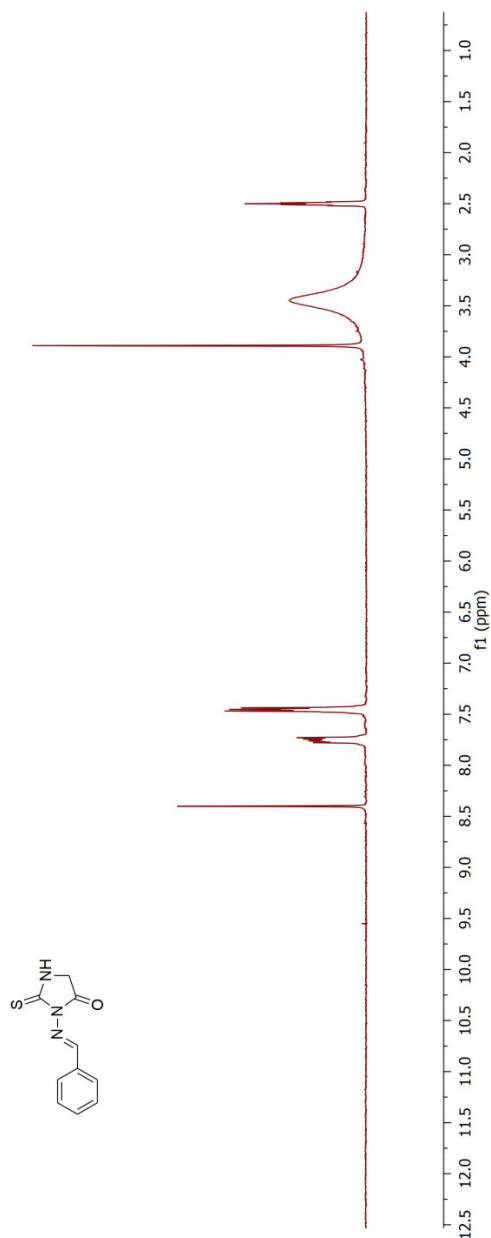


Fig. S-1. ¹H NMR spectra of 3-((phenylmethylene)amino)-2-thioxo-4-imidazolidinone (3).

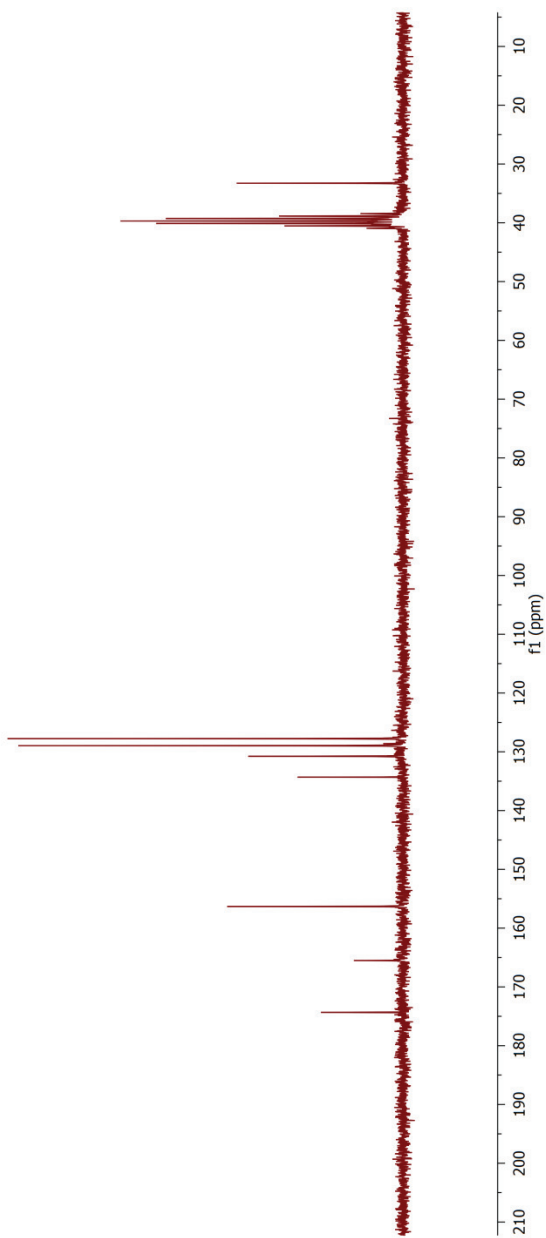


Fig. S-2. ^{13}C NMR spectra of 3-((phenylmethylene)amino)-2-thioxo-4-imidazolidinone (3).

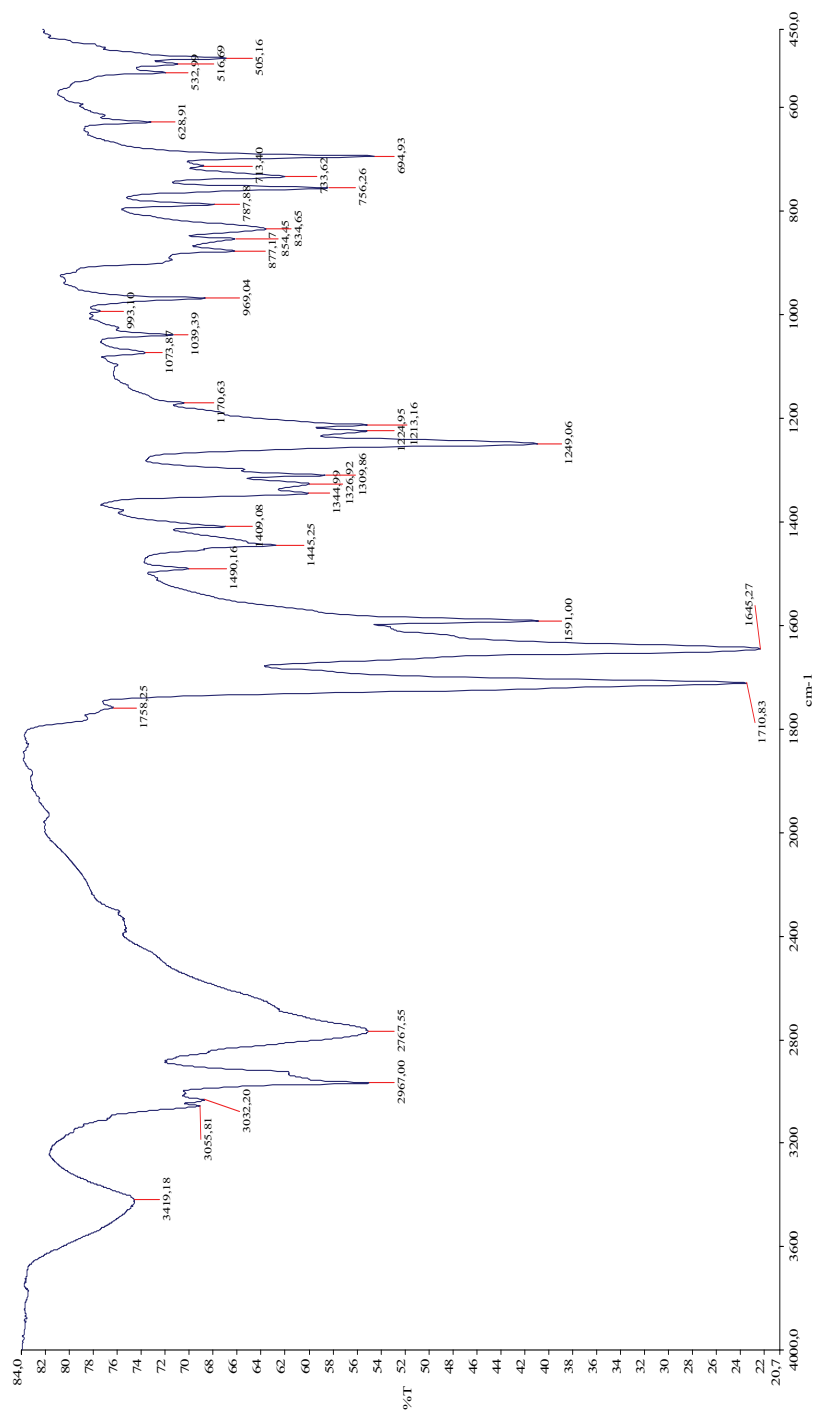


Fig. S-3. IR spectra of 3-((phenylmethylene)amino)-2-thioxo-4-imidazolidinone (**3**).

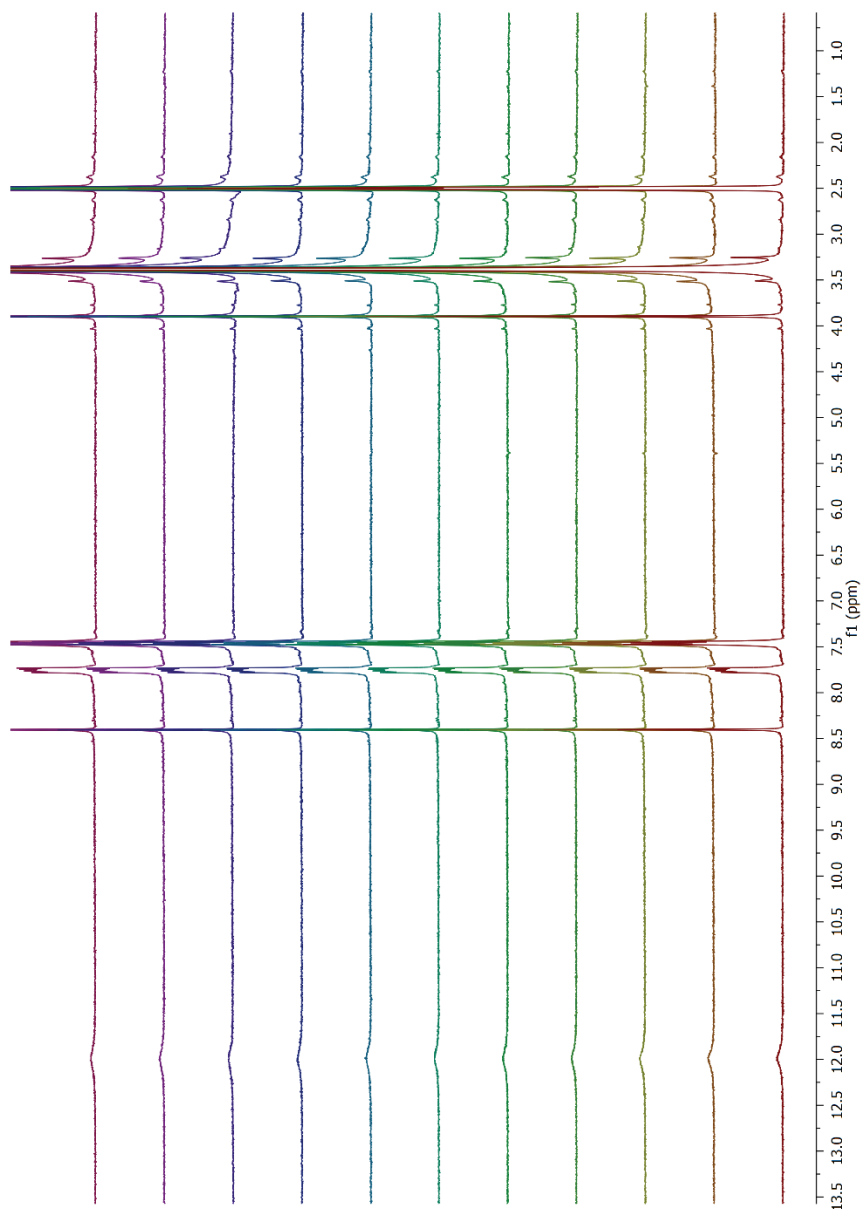


Fig. S-4. ¹H NMR kinetic experiment of 3-((phenylmethylene)amino)-2-thioxo-4-imidazolidinone (**3**) and K₂[PdCl₄] in DMSO-*d*₆. No reaction takes place.

Table S-I. Time and concentration parameters for the reaction of 3-((phenylmethyl-ene)amino)-2-thioxo-4-imidazolidinone (**3**) and *cis*-[PdCl₂(dms-*S*)₂]

<i>t</i> / s	<i>c</i> / mol L⁻¹	ln (<i>c</i> / mol L⁻¹)
340	0.006693	-5.00669
512	0.007168	-4.93813
684	0.007443	-4.90048
1028	0.00785	-4.84722
1372	0.009175	-4.69125
2316	0.010082	-4.59697
2788	0.0108	-4.52819
3560	0.011186	-4.4931
4332	0.011415	-4.47287
6176	0.011786	-4.44085
8320	0.011965	-4.42581
10292	0.012082	-4.41601
12264	0.012107	-4.41394
18008	0.01244	-4.38688
21780	0.012507	-4.38144
25552	0.012825	-4.35634
29324	0.012904	-4.35023
36868	0.012972	-4.34499
40640	0.013172	-4.32969
44412	0.013482	-4.30637
48184	0.013561	-4.30056
51956	0.013732	-4.288

Table S-II. Time and concentration parameters for the reaction of 3-((phenylmethyl-ene)amino)-2-thioxo-4-imidazolidinone (**3**) and PdCl₂

<i>t</i> / s	<i>c</i> / mol L ⁻¹	ln (<i>c</i> / mol L ⁻¹)
333	0.001286	-6.65642
677	0.001536	-6.47874
1021	0.001539	-6.47642
1365	0.001782	-6.32992
1837	0.002182	-6.12743
2309	0.002421	-6.02338
3553	0.002779	-5.8858
4325	0.002843	-5.86293
5097	0.003129	-5.76716
6169	0.003157	-5.75807
7241	0.003371	-5.6924
10285	0.003704	-5.59844
14229	0.003829	-5.56524
18001	0.003964	-5.53041
21773	0.003972	-5.52861
25545	0.004261	-5.4583
29317	0.004868	-5.32508
33089	0.004911	-5.31632
36861	0.004957	-5.30691
40633	0.005093	-5.2799
44405	0.005111	-5.2764
48177	0.005779	-5.15358