

SUPPLEMENTARY DATA

TABLE 1

Kinetic Data for the Reactions of $[S_2MoS_2Cu(SC_6H_4R-4)]^{2-}$ (R = MeO, H, Cl or NO_2) with CN^- in MeCN at 25.0 °C. Wavelength = 470 nm

[MoCu] / mmol dm ⁻³	[CN ⁻] / mmol dm ⁻³	k_{obs} / s^{-1}			
		R = NO ₂	R = Cl	R = H	R = MeO
0.05	1.0	33.0	25.2	18.9	17.3
	2.0	52.2	33.0	23.4	19.2
	4.0	73.3	48.0	27.8	23.3
	5.0	85.0	52.2	31.3	25.7
	12.0		97.0	50.2	40.3
	20.0			79.0	58.2
0.013	5.0			32.5	
0.025	5.0			35.3	
0.10	5.0			27.8	
0.20	5.0			31.6	

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TABLE 2

Kinetic Data for the effect of Temperature on the Reaction of $[\text{S}_2\text{MoS}_2\text{Cu}(\text{SC}_6\text{H}_5)]^{2-}$ with CN^- in MeCN. Wavelength = 470 nm

[MoCu] / mmol dm ⁻³	[CN ⁻] / mmol dm ⁻³	$k_{\text{obs}} / \text{s}^{-1}$			
		T = 15	T = 20	T = 30	T = 35
0.05	2.0	10.2	17.0	18.3	22.2
	5.0	21.2	23.0	24.2	29.3
	7.5	27.0	28.3	31.7	36.3
	10.0	31.2	37.3	40.8	47.0
	12.0	34.2	39.3	45.2	49.4

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TABLE 3

Kinetic Data showing the Effect of $\text{C}_6\text{H}_5\text{S}^-$ on the Reaction between $[\text{S}_2\text{MoS}_2\text{Cu}(\text{SC}_6\text{H}_5)]^{2-}$ and CN^- in MeCN at 25.0 °C. Wavelength = 470 nm

$[\text{MoCu}] / \text{mmol dm}^{-3}$	$[\text{CN}^-] / \text{mmol dm}^{-3}$	$[\text{C}_6\text{H}_5\text{S}^-] / \text{mmol dm}^{-3}$	$k_{\text{obs}} / \text{s}^{-1}$
0.05	1.0	20.0	37.8
	2.0		43.2
	3.0		57.3
	4.0		68.3
	5.0		73.2
	6.0		78.8
	7.5		81.2
	10.0		86.8
0.05	2.0	0.0	28.0
			29.2

1.0 36.3
33.8

TABLE 3 (continued)

[MoCu] / mmol dm ⁻³	[CN ⁻] / mmol dm ⁻³	[C ₆ H ₅ S ⁻] / mmol dm ⁻³	<i>k</i> _{obs} / s ⁻¹
0.05	2.0	3.0	37.3
			38.2
		5.0	52.2
			55.4
		10.0	60.0
			64.0
		20.0	70.3
			69.2
		30.0	69.2
			69.5

