

Supporting Information to accompany:

A Redox Series of Gallium(III) Complexes and Ligand-based Two-Electron Oxidation to Afford a Ga-thiolate Complex

Kristin Kowolik,^a Maheswaran Shanmugam,^a Thomas W. Myers,^a Chelsea D. Cates,^a and Louise A. Berben*^a

Department of Chemistry, University of California, Davis CA 95616, USA

E-mail: laberben@ucdavis.edu

Table S1. Electrochemical potentials (V vs. SCE) for ligand reduction events observed in complexes **1**, **2b**, and **3**.

^a	$E^{\circ}_{\text{IPIP/IPIP-}}$	$E^{\circ}_{\text{IPIP-/IP-IP-}}$	ΔE°	$E^{\circ}_{\text{IP-IP-/IP2-IP2-}}^a$
1	-0.19	-0.62	0.43	-1.57
2b	-0.54	^a	0	-1.31
3	-0.16	-0.54	0.38	-1.52

One-electron processes overlap, and so only one potential is reported.

Table S2. Comparison of IR absorption bands for **1** – **3**.

	$\text{C}_{\text{im}}\text{-N}_{\text{im}}$
1	1586
2a	1567
2b	1567
2c	1567
3	1586

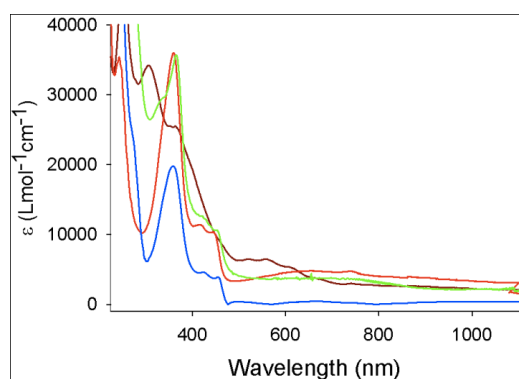


Figure S1. UV-Visible absorption spectra for **1** (red), **2a** (black), **2c** (green) and **3** (blue) in THF.

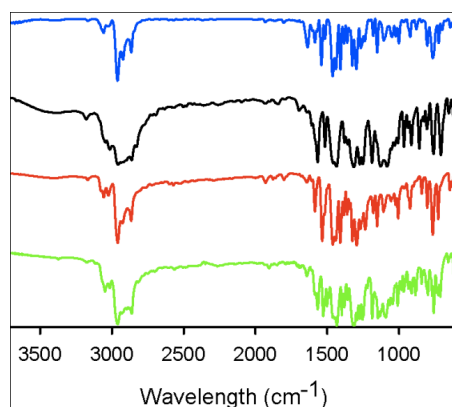


Figure S2. IR spectrum for **1** (red), **2a** (black), **2c** (green) and **3** (blue).