

Abstract Submitted  
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**Photophysical Properties of an Organogold(I) Complex** JACOB MALLOY, Department of Physics, United States Air Force Academy, JOSEPH MIHALY, Department of Chemistry, Case Western Reserve University, TOD GRUSENMEYER, JOY HALEY, Air Force Research Laboratory, Wright-Patterson Air Force Base, THOMAS GRAY, Department of Chemistry, Case Western Reserve University, KIMBERLY DE LA HARPE, Department of Physics, United States Air Force Academy, DEPARTMENT OF PHYSICS, UNITED STATES AIR FORCE ACADEMY COLLABORATION, DEPARTMENT OF CHEMISTRY, CASE WESTERN RESERVE UNIVERSITY COLLABORATION, AIR FORCE RESEARCH LABORATORY, WRIGHT-PATTERSON AIR FORCE BASE COLLABORATION — We will report on the photophysical properties of a novel dinuclear gold(I) complex consisting of a benzothiazole-2,7-fluorenyl moiety bound to N-heterocyclic carbene ligands via gold(I)-carbon  $\sigma$ -bonds. This complex absorbs in the ultraviolet and exhibits dual fluorescence and phosphorescence in the visible range at room temperature. The ground-state absorption and emission properties of this compound, as well, as excited-state lifetimes will be compared with similar systems to understand how the ancillary ligands and additional gold(I) center impacts excited-state dynamics.

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