Electronic Supplementary Information

Gold oxidative dissolution by (thioamide)-I_2 adducts

Francesco Isaia,[*a] M. Carla Aragoni,[a] Massimiliano Arca,[a] Claudia Caltagirone,[a] Francesco Demartin,[b] Alessandra Garau,[a] and Vito Lippolis[a]

[a] Dipartimento di Scienze Chimiche e Geologiche Università degli Studi di Cagliari, S.S. 554 bivio per Sestu, I-09042 Cagliari, Italy.
[b] Dipartimento di Chimica Strutturale e Stereochimica Inorganica, Università di Milano, via G. Venezian 21, I-20133 Milano, Italy

e-mail: isaia@unica.it

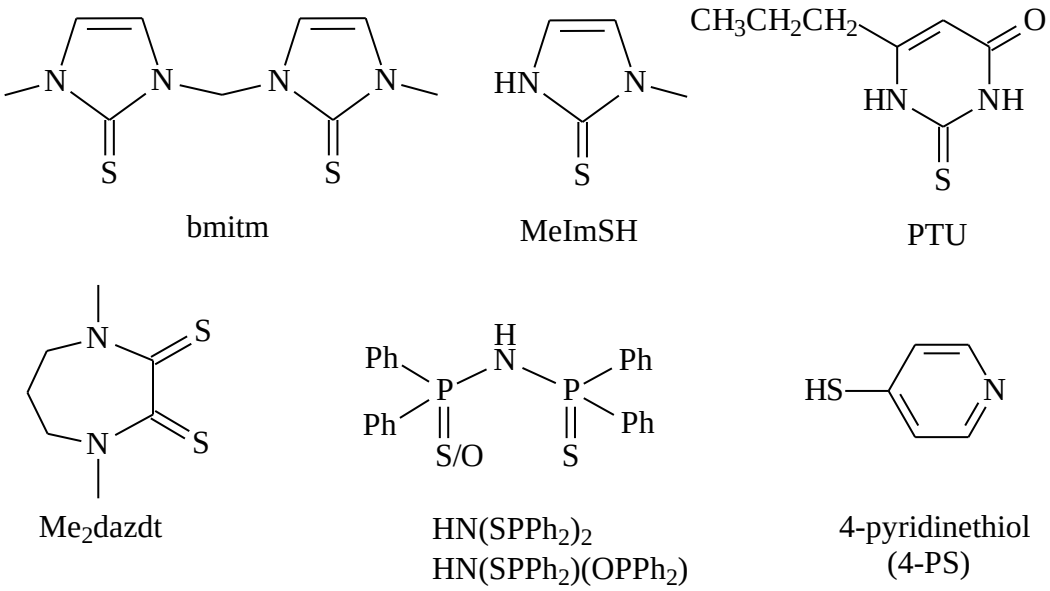

Figure S1. Chemical structures of compounds discussed in this paper: bmitm = 1,1'-bis(3-methyl-4-imidazoline-2-thione)methane; Me_2dazdt = *N*,*N'*-dimethylperhydro-1,4-diazepine-2,3-dithione; $HN(SPPh_2)_2$ = tetraphenyldithioimidodiphosphine; $HN(SPPh_2)(OPPh_2)$ = tetraphenylthiooxoimidodiphosphine; MeImSH = methimazole, 1-methyl-3*H*-imidazole-2-thione; PTU = propylthiouracil, 6-propyl-2-sulfanylpyrimidin-4-one; and 4-PS = 4-pyridinethiol.

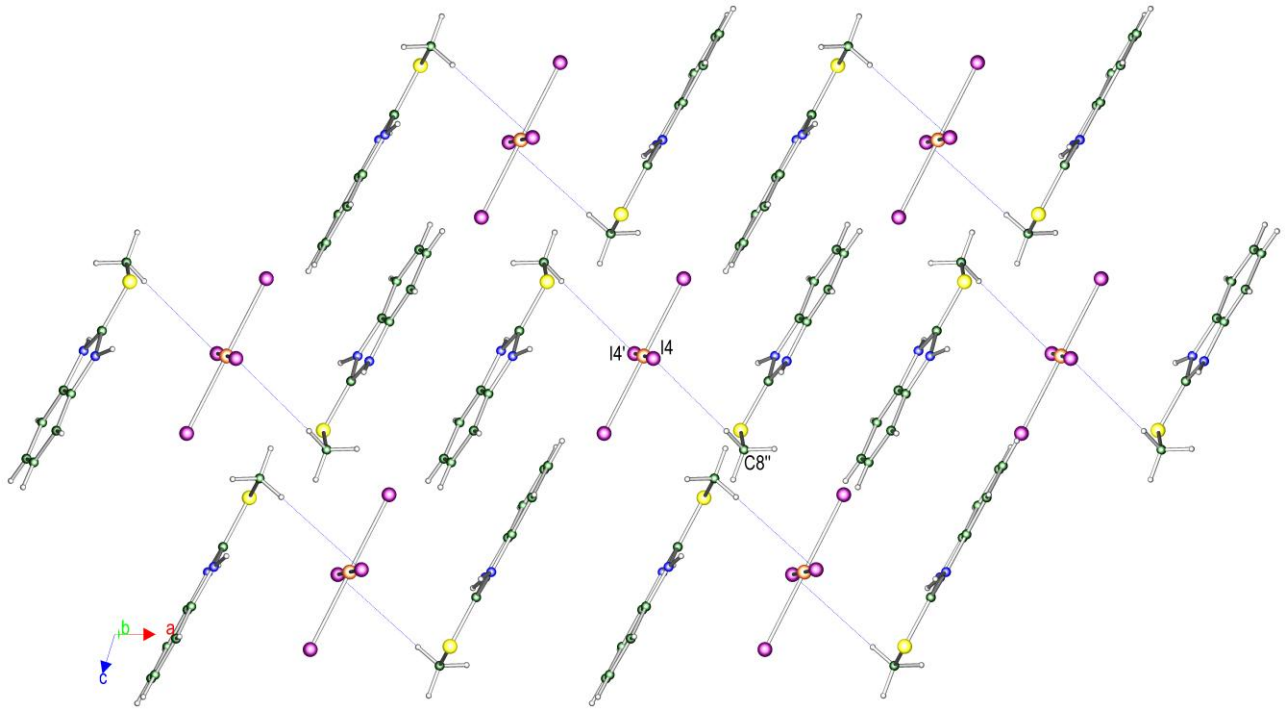

Figure S2. Packing view of $[(mtbiH)_2](AuI_4)I_3$ showing the weak C8"─H8c···I4 interactions involving the AuI_4^- anions; H···I, 3.32 Å; C─H···I, 164°. Symmetry codes: ' –x, –y, –z; " 1–x, 1–y, 1–z.

Table S1. ^{13}C NMR data for complex $[Au(mbtt)_2]I_3$ and donor mbtt (δ in ppm, DMSO-d_6, 25 °C)

Compound	CS	NMe	Aromatic carbons
$[Au(mbtt)_2]I_3$	178.0	34.3	145.1, 129.3, 127.3, 125.1, 122.0, 113.6,
mbtt	188.1	33.2	141.9, 126.4, 127.2, 125.0, 121.7, 113.5