

Supporting information

**Liquid Crystals of Gold(I) N-Heterocyclic
Carbene Complexes**

Roy T. W. Huang, W. C. Wang, Y. U. Yang, J. T. Lu and Ivan J. B. Lin*

Department of Chemistry, National Dong Hwa University, Hualien, 974, Taiwan

Department of Chemistry, National Dong Hwa University, Shoufeng,

Hualien 974, Taiwan

Tel : +886-3-863-3599

Fax : +886-3-863-3570

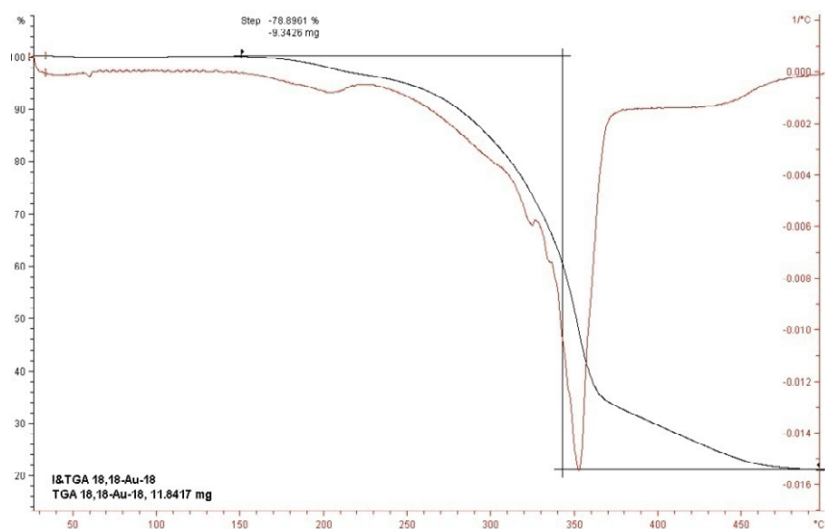
E-mail: ijblin@mail.ndhu.edu.tw

Table S1. Summary of crystallographic data for $\text{II}_{18}\text{A}_{18}$.

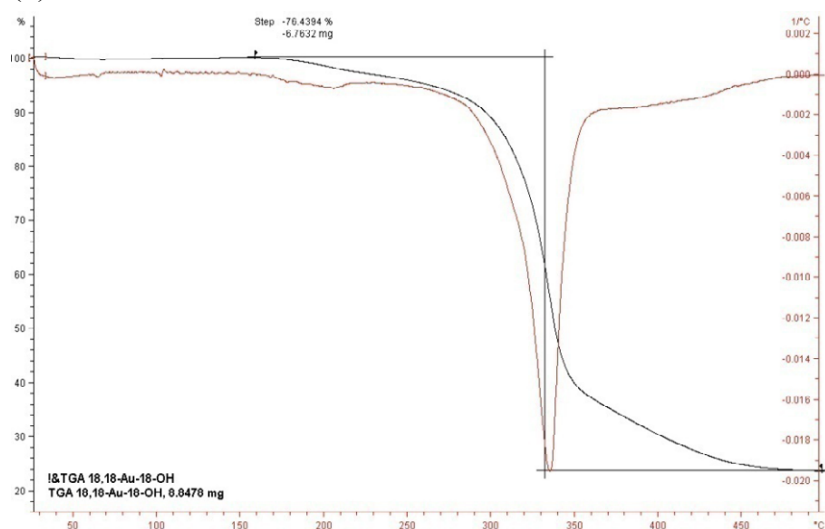
	$\text{II}_{18}\text{A}_{18}$
Formula	$\text{C}_{60}\text{H}_{116}\text{N}_5\text{O}_3\text{Au}$
Fw	1152.54
Crystal syst	Triclinic
Space group	P-1
a , Å	10.1515(15)
b , Å	10.3189(15)
c , Å	31.290(5)
A , deg	99.310(4)
B , deg	90.394(5)
Γ , deg	98.390(4)
V , Å ³	3198.3(8)
Z	2
D_{calc} , Mg/m ³	1.197
T , K	273
μ , mm ⁻¹	2.34
$F(000)$	1228
Crystal size/mm	0.20 x 0.18 x 0.18
θ_{min} , θ_{max} , deg	2.0-25.5
Reflections collected	38752
Independent reflections(R_{int})	11924(0.072)
Data/restraints/ parameters	11924/0/625
Goodness-of-fit on F^2	1.096
$R1/wR2$ ($I > 2\sigma(I)$)	0.0674/ 0.1669
$R1/wR2$ (all data)	0.0832/ 0.1782



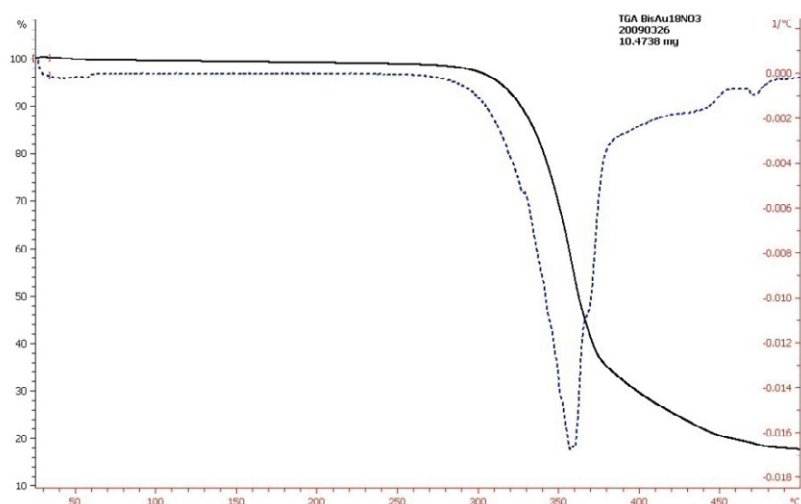
(a)



(b)



(c)



(d)

Figure S1 TGA diagram of (a) **I**₁₈, (b) **II**₁₈**A**₁₈, (c) **II**₁₈**B**₁₈, and (d) **III**₁₈.

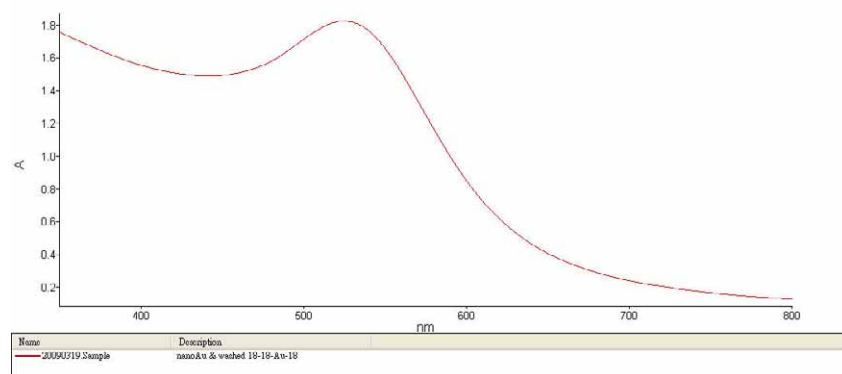


Figure S2 UV spectrum of Au NPs (prepared from **II**₁₈**A**₁₈) in CH₂Cl₂ (λ_{\max} at 524 nm).

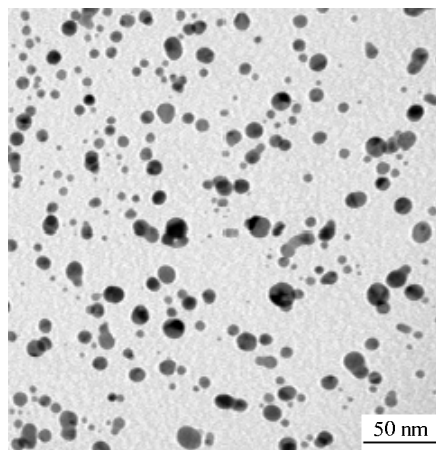


Figure S3 TEM image of Au NPs (prepared from **II**₁₈**A**₁₈).