

SUPPLEMENTARY INFORMATION (SI)

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Atomically precise cluster-based white light emitters §

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§Dedicated to Professor M V George on the occasion of his 90th Birth Anniversary

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Figure S1-S4

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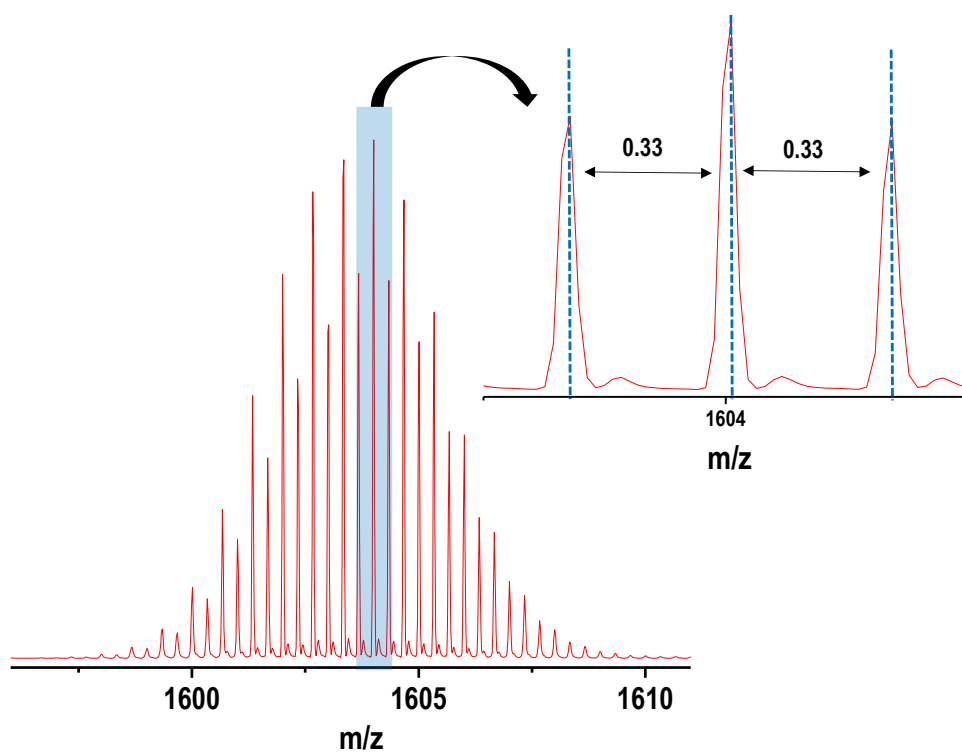


Figure S1. The expanded ESI MS of [Ag₂₉(BDT)₁₂]³⁻ (m/z 1603). The separation between two peaks is 0.33 which confirms 3⁻ charge state of the cluster.

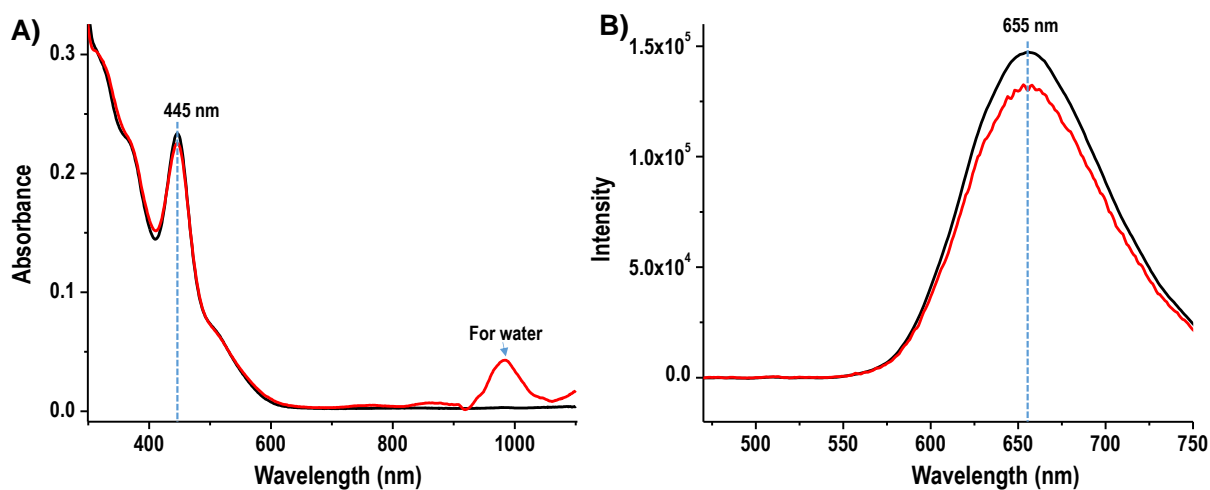


Figure S2. (A) The absorption and (B) the emission spectra of $[\text{Ag}_{29}(\text{BDT})_{12}(\text{PPh}_3)_4]^{3-}$ cluster in DMF (black line) and DMF/ H_2O mixture (red line). The red colored absorption spectrum is having one extra peak at ~ 980 nm due to the presence of H_2O . The other spectral features (peaks at 445 and 512 nm) of red spectrum are similar to that of black one which suggest the cluster stability in DMF/ H_2O mixture. The emission spectrum of the cluster in DMF/ H_2O is similar to that DMF solution.

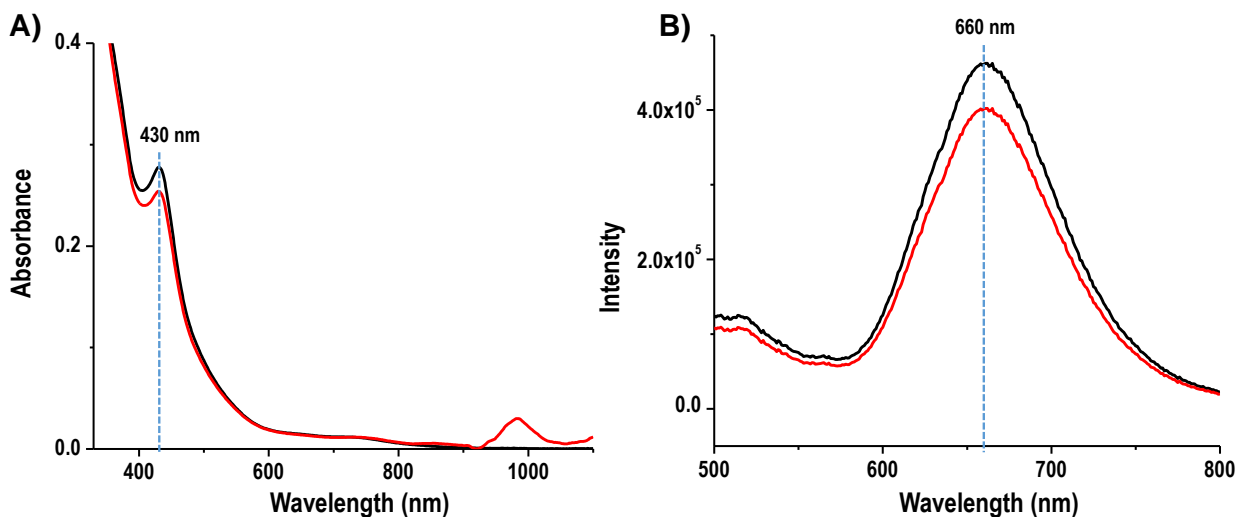


Figure S3: (A) The absorption and (B) the emission spectra of $[\text{Au}_x\text{Ag}_{29-x}(\text{BDT})_{12}(\text{PPh}_3)_4]^{3-}$ cluster in DMF (black line) and DMF/ H_2O mixture (red line). The red colored absorption spectrum exhibits one extra peak at ~ 980 nm which is due to the presence of H_2O . The other spectral features (peaks at 430 and 730 nm) of red spectrum are similar to that of black one which suggest the cluster is stable in DMF/ H_2O mixture. The cluster possesses similar emission spectrum in DMF/ H_2O mixture to that of DMF solution.

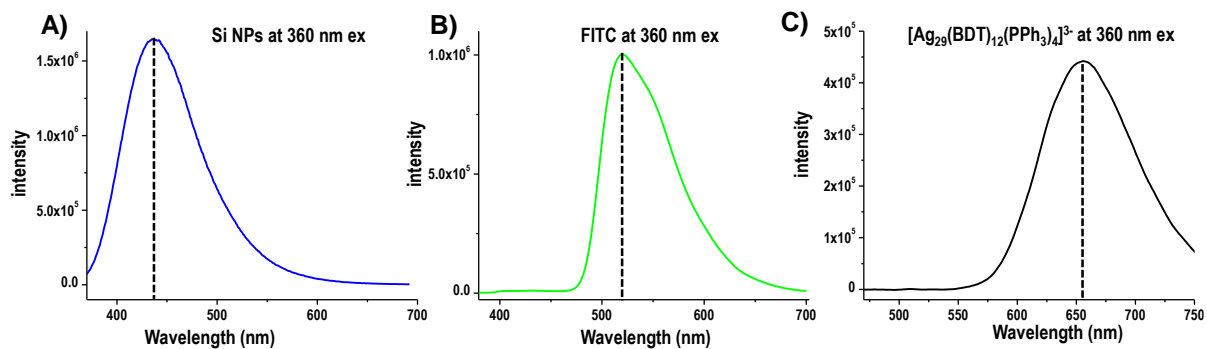


Figure S4. The emission spectra of (A) Si NPs, (B) FITC dye and (C) $[\text{Ag}_{29}(\text{BDT})_{12}(\text{PPh}_3)_4]^{3-}$ at 360 nm excitation. The concentrations of individual components used are the same in Figure 3.