

Electronic Supplementary Information

Luminescence thermochromism of acrylic materials incorporating copper iodide clusters

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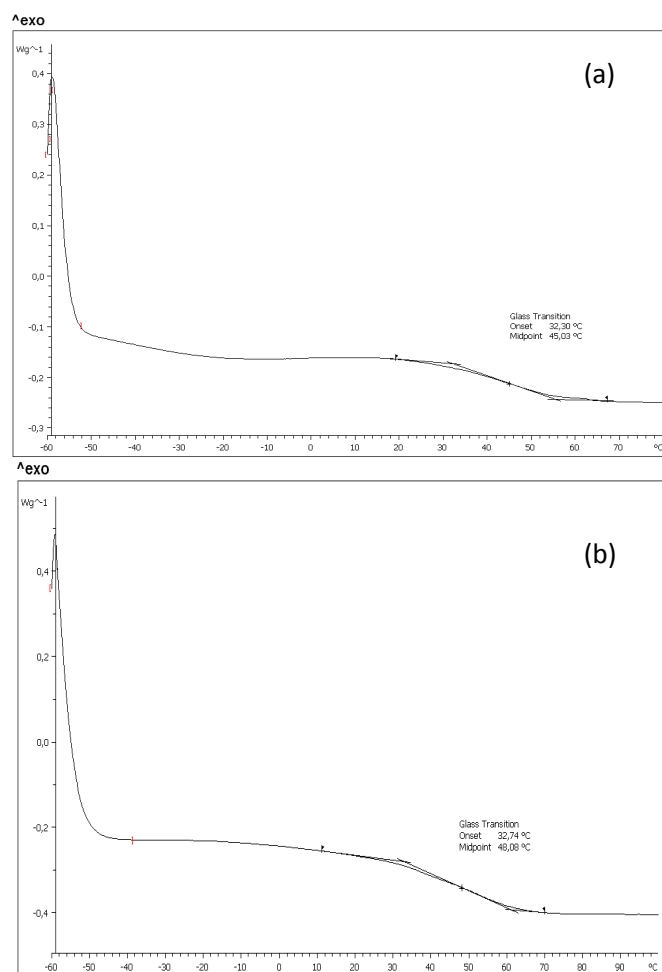


Figure S1. DSC curves of BEDA (a) and BEDA + 2wt% cluster (b).

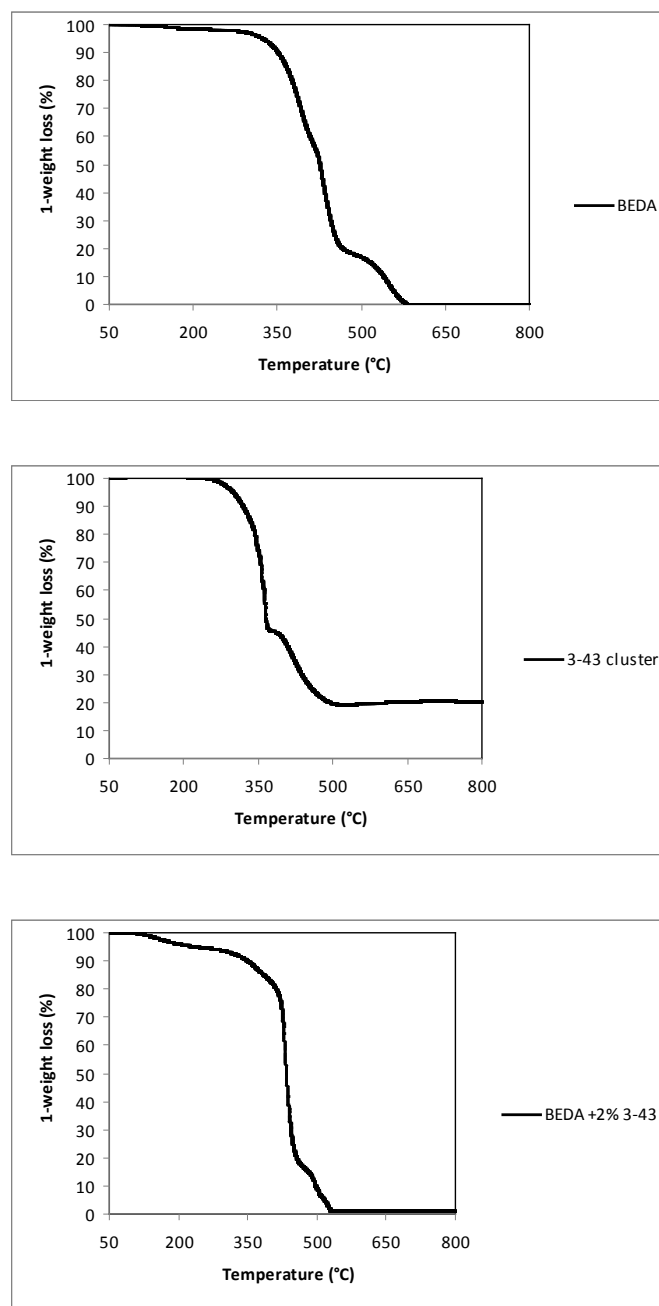


Figure S2. TGA curves of BEDA, the pure cluster and BEDA + 2wt% cluster.

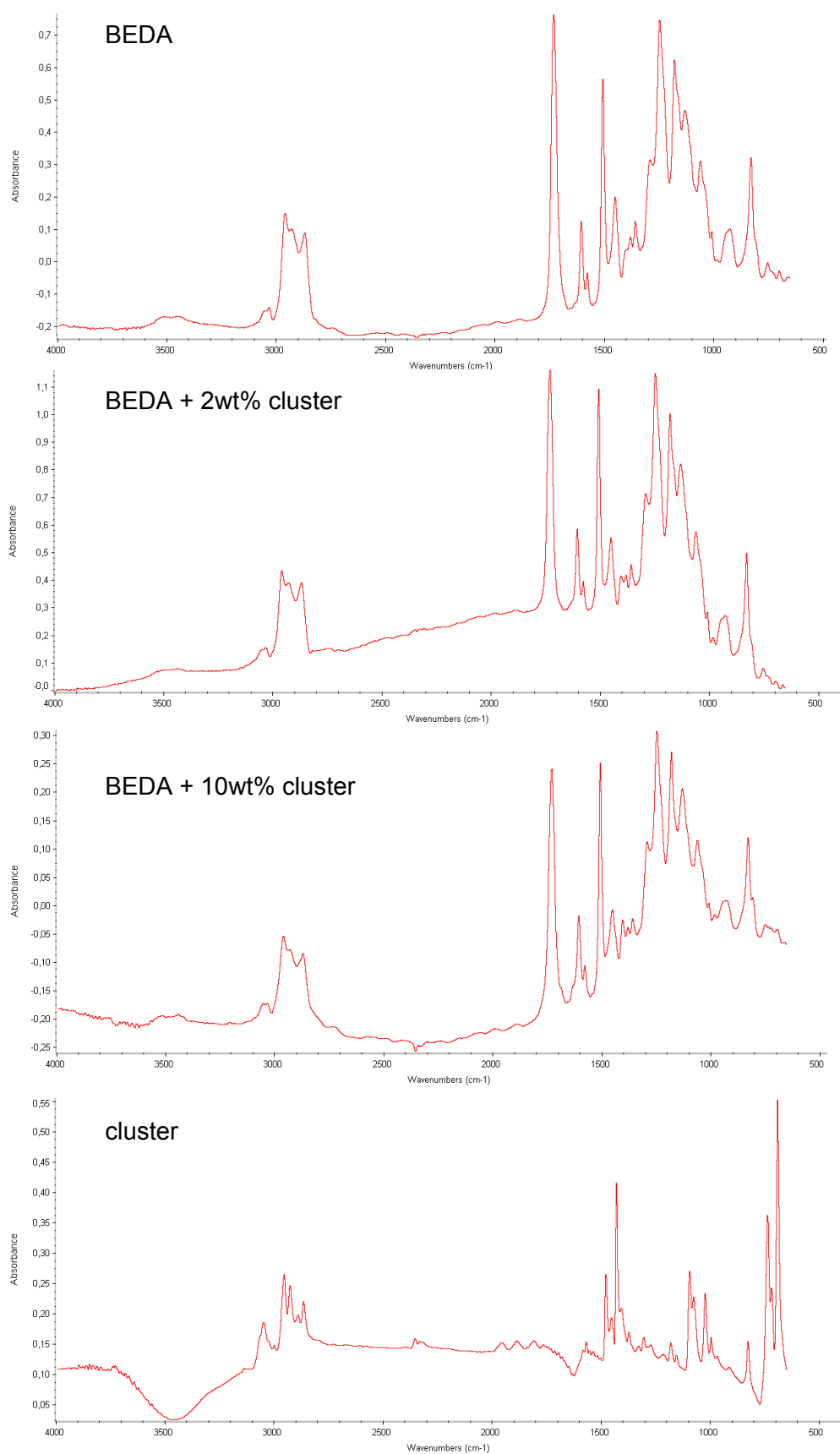


Figure S3. FTIR spectra of pure BEDA, BEDA + 2 and 10 wt% cluster and the pure cluster.

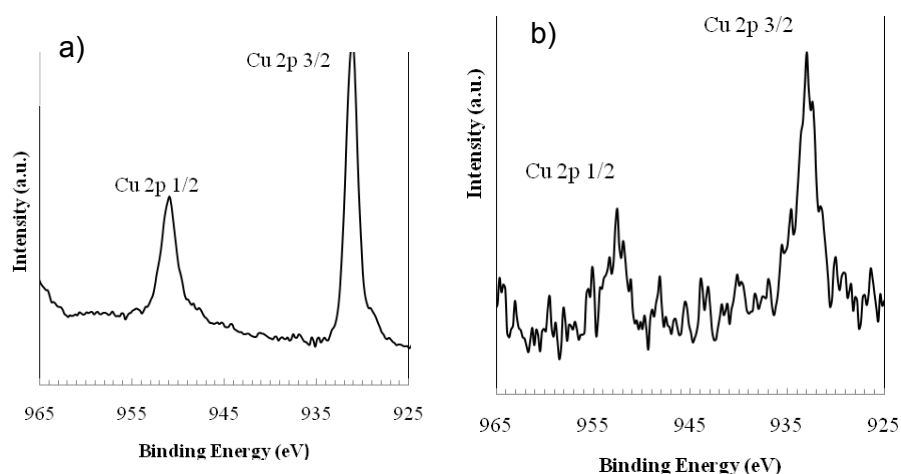


Figure S4. XPS spectra of Cu 2p lines of (a) $[\text{Cu}_4\text{I}_4(\text{PPh}_2(\text{CH}_2)_2\text{CH}_3)_4]$ and (b) BEDA+2wt% cluster.

Table S1. XPS data for the $[\text{Cu}_4\text{I}_4(\text{PPh}_2(\text{CH}_2)_2\text{CH}_3)_4]$ and BEDA+2 wt% cluster.

	$[\text{Cu}_4\text{I}_4(\text{PPh}_2(\text{CH}_2)_2\text{CH}_3)_4]$					BEDA + $[\text{Cu}_4\text{I}_4(\text{PPh}_2(\text{CH}_2)_2\text{CH}_3)_4]$ 2 wt%				
	BE Values (eV)	BE Cu 2p _{3/2} corrected	correct ion	BE Values corrected (eV)	Atomic %	BE Values (eV)	BE Cu 2p _{3/2} corrected	correct ion	BE Values corrected (eV)	Atomic %
Cu 2p _{3/2}	931.17	933	1.83	933	4.51	932.01	933	0.99	933	0.12
I 3d _{5/2}	617.66			619.82	5.53	619.00			619.99	0.10
P 2p	128.99			130.82	4.15	-			-	-
O 1s	530.91			532.74	3.80	531.15			532.13	4.52
C 1s	282.84			284.67	82.02	283.09			284.08	95.26

Table S2. Photoluminescence data.

compound	T (K)	λ_{em}^{max} (nm)	Band Attribution
BEDA composite (2 wt%)	290	580	LE
	200	575	LE
	150	575	LE
		430	HE
	100	575	LE
430		HE	
[Cu ₄ I ₄ (PPh ₂ (CH ₂) ₂ CH ₃) ₄] in CH ₂ Cl ₂	290	610	LE
	200	625	LE
	150	580	LE
		435	HE
	100	575	LE
425		HE	
8	575	LE	
	420	HE	