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Quaternary Type IV Deep Eutectic Solvent-Based WO₃/Nb₂O₅ Photochromic and Reverse Fading Composite Complex

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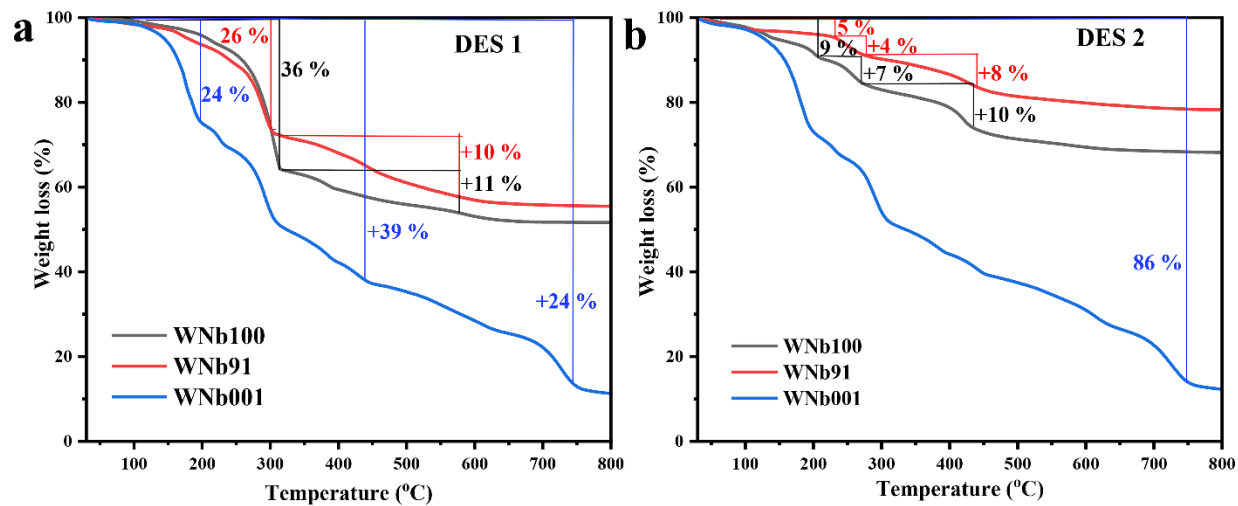


Fig. S1 Thermogravimetric curves of (a) DES 1 – based metallic complexes (b) DES 2 – based metallic complexes.

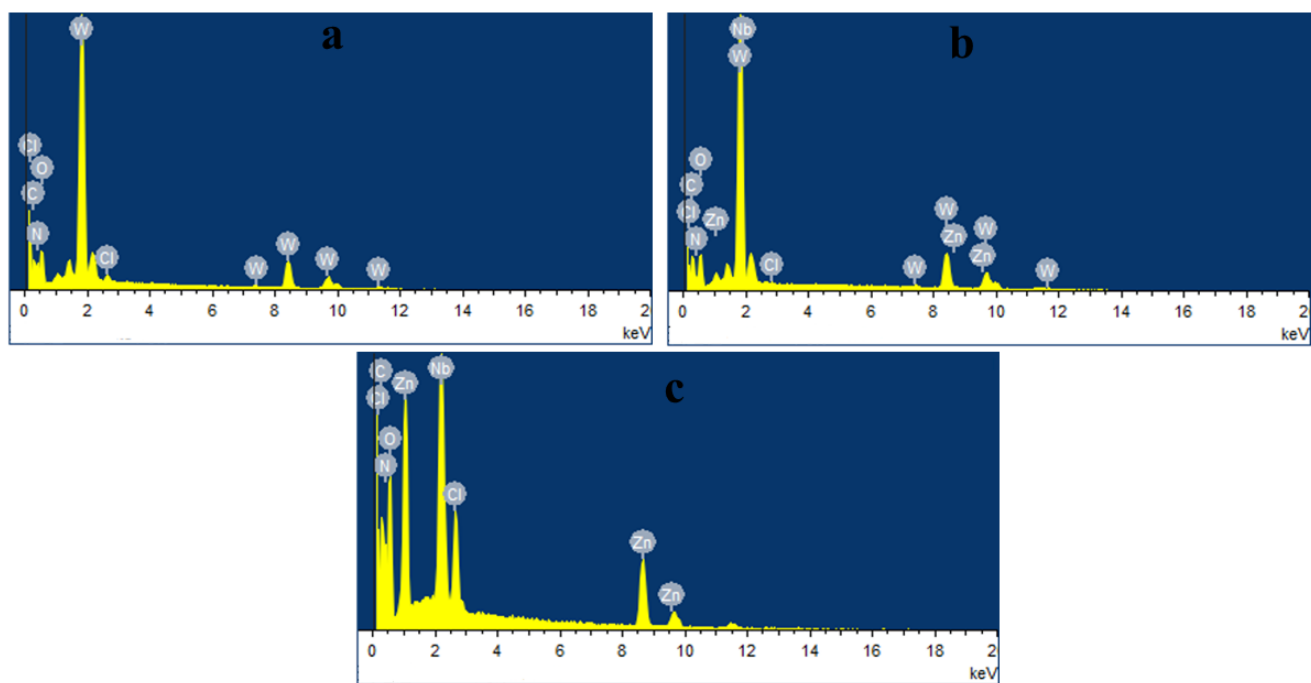


Fig. S2 EDX spectra of (a) DES 1-WNb100 (b) DES 1-WNb91 (c) DES 1-WNb001

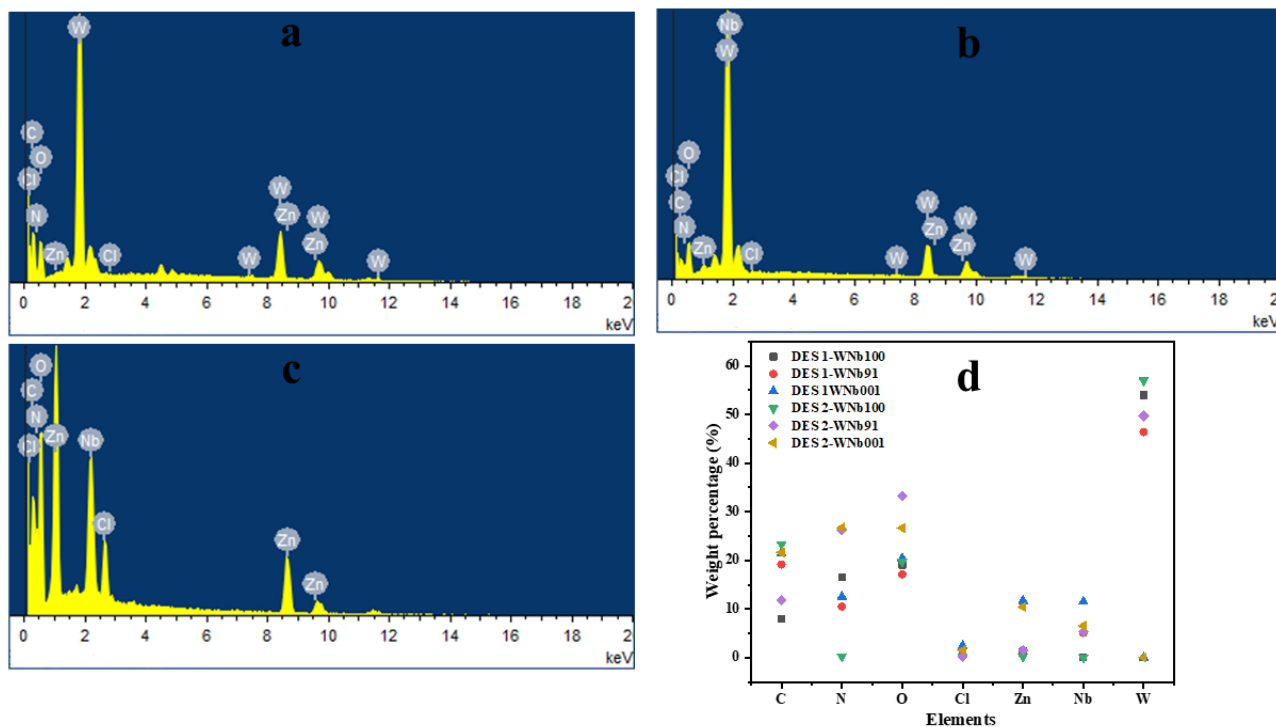


Fig. S3 EDX spectra of (a) DES 2-WNb100 (b) DES 2-WNb91 (c) DES 2-WNb001 (d) Elemental plot showing the weight percent composition of the metallic complexes.

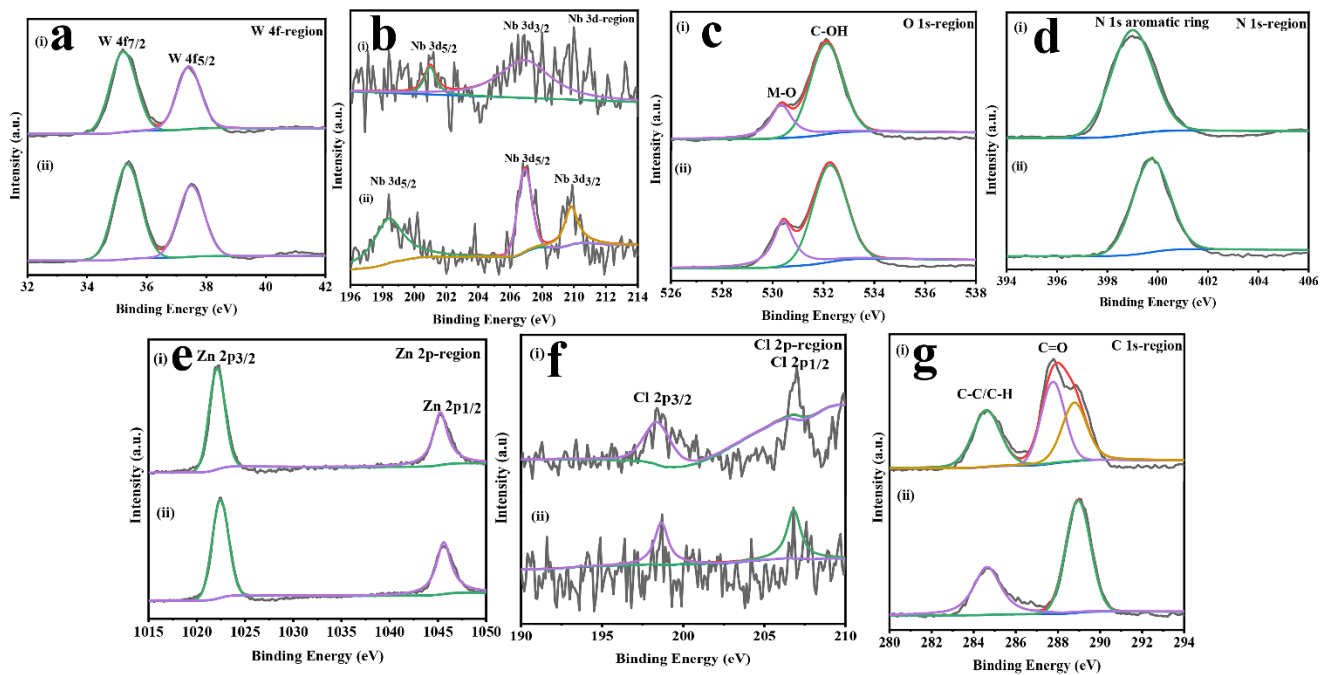


Fig. S4 XPS scan spectra of (i) DES 1-WNb91 and (ii) DES 2-WNb91 displaying the (a) W 4f (b) Nb 3d (c) O 1s (d) N 1s (e) Zn 2p (f) Cl 2p and (g) C 1s regions before UV-light irradiation.

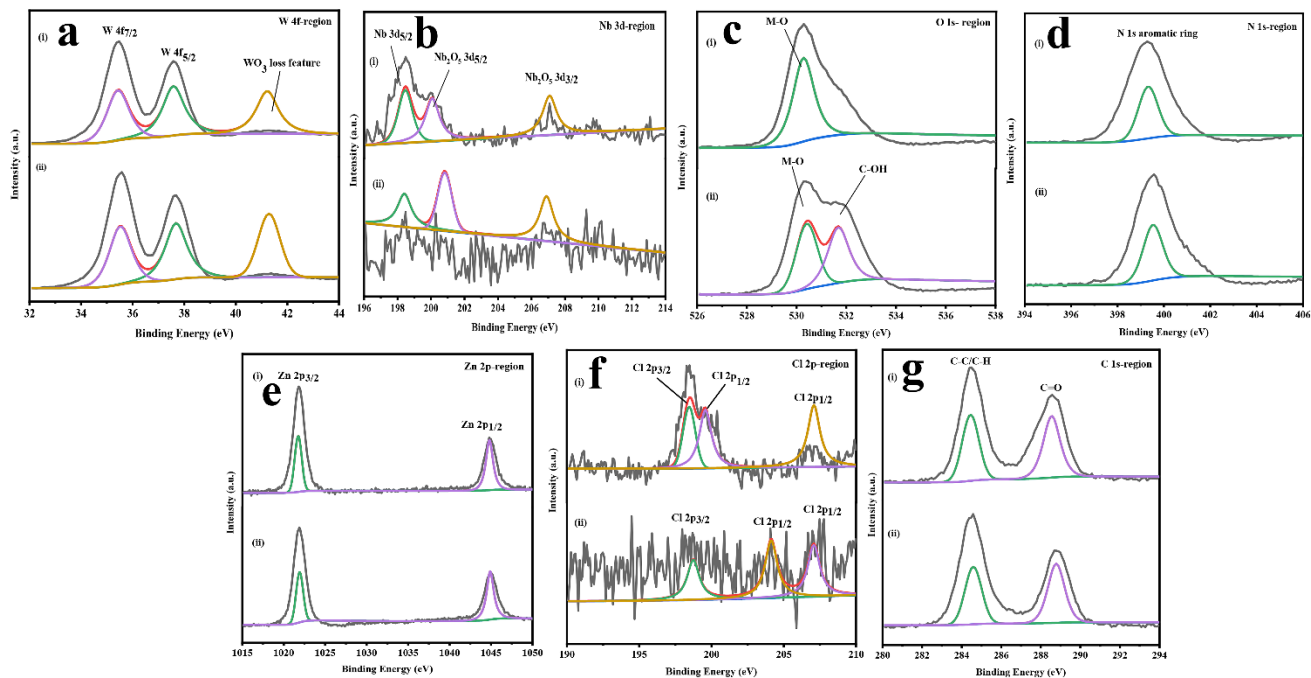


Fig. S5 XPS scan spectra of (i) DES 1-WNb91 and (ii) DES 2-WNb91 displaying the (a) W 4f (b) Nb 3d (c) O 1s (d) N 1s (e) Zn 2p (f) Cl 2p and (g) C 1s regions after UV-light irradiation.

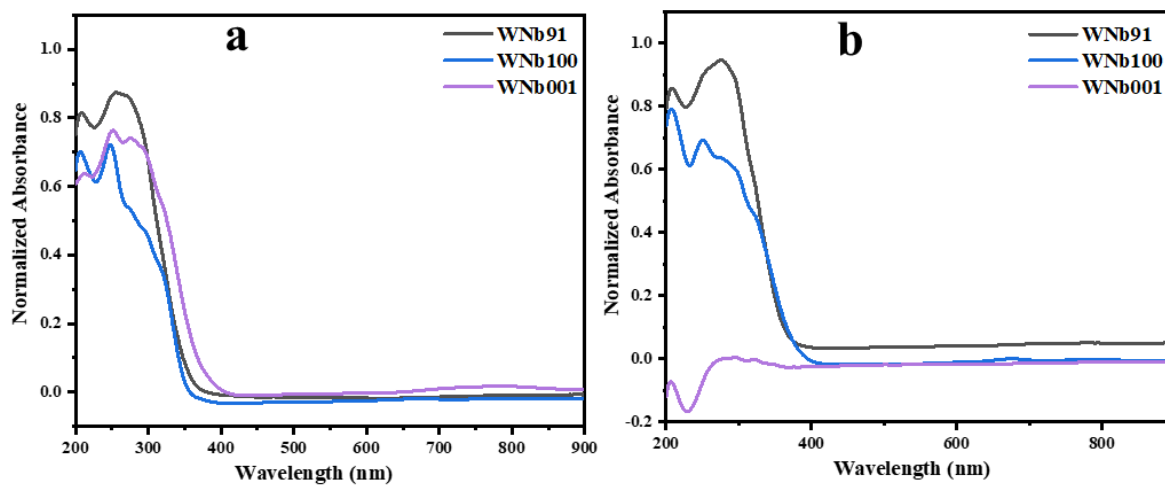


Fig. S6 UV-Vis absorption spectra of (a) DES 1 (b) DES 2 based metallic complexes

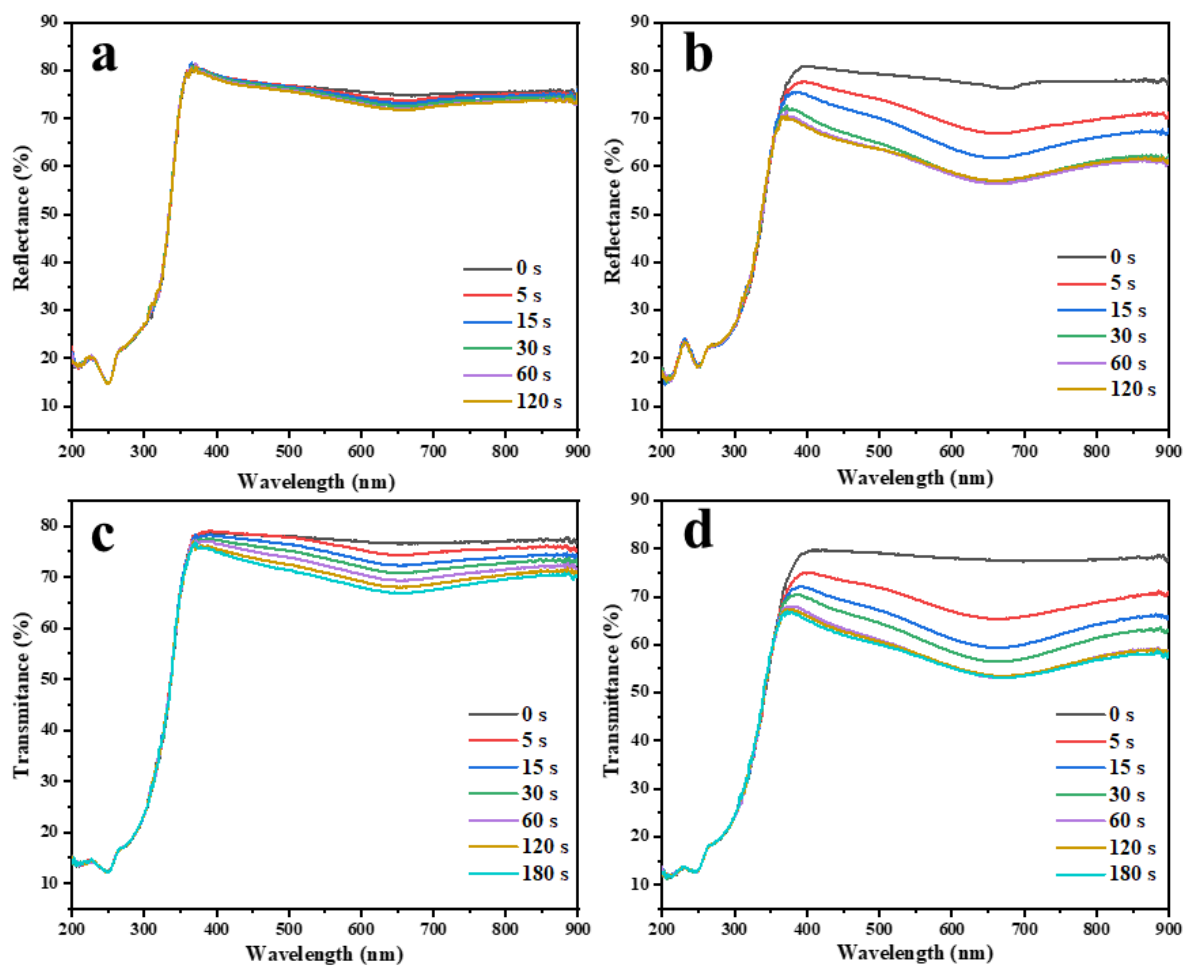


Fig. S7 UV–Vis diffuse reflectance spectra of (a) DES 1-WNb91 (b) DES 2-WNb91 and UV–Vis diffuse transmittance spectra of (c) DES 1-WNb91 (d) DES 2-WNb91.

References

- [1] H. Mou, J. Wang, D. Zhang, D. Yu, W. Chen, D. Wang, T. Mu, *J. Mater. Chem. A* **2019**, *7*, 5719–5725.
- [2] O. Oderinde, M. Kang, M. Kalulu, F. Yao, G. Fu, *Superlattices Microstruct.* **2019**, *125*, 103–112.