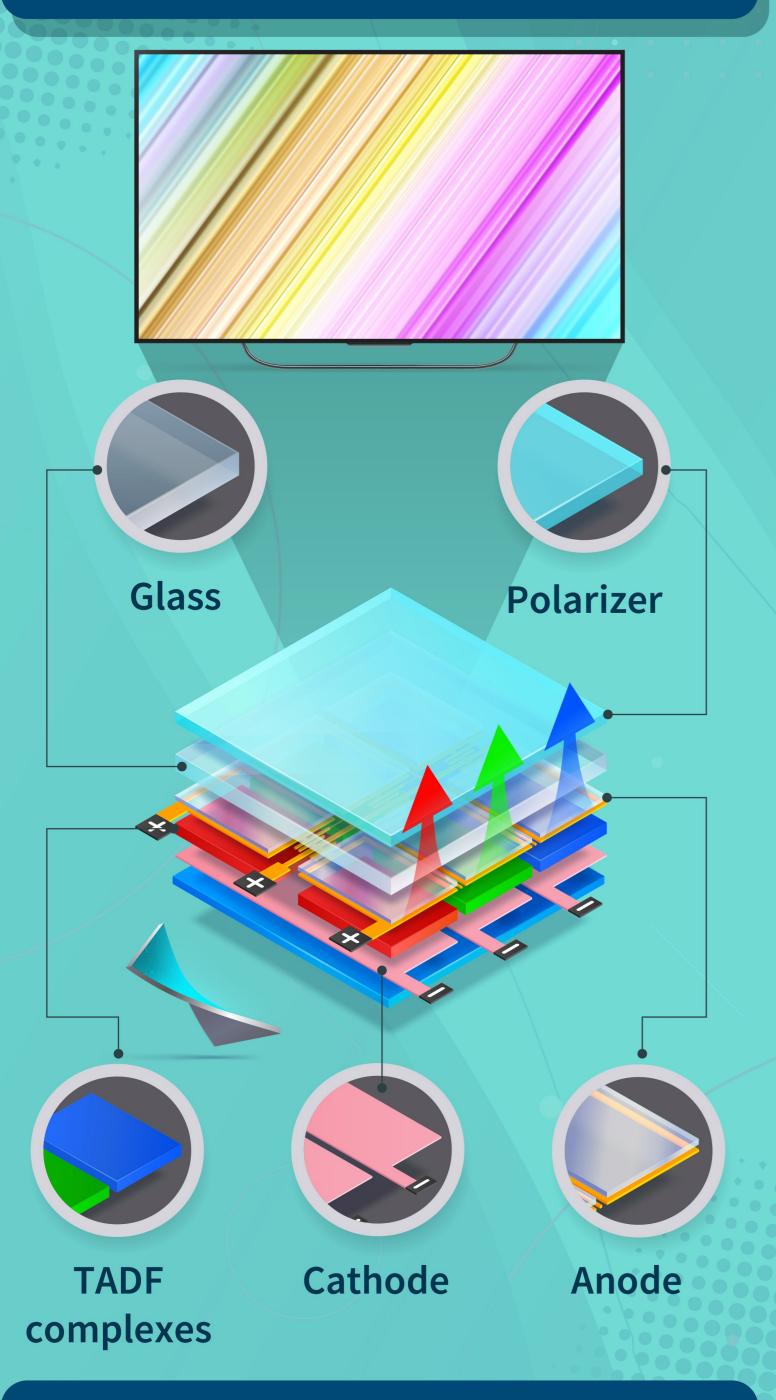
Molecular Design of Highly Emissive Gold Complexes for OLED Applications

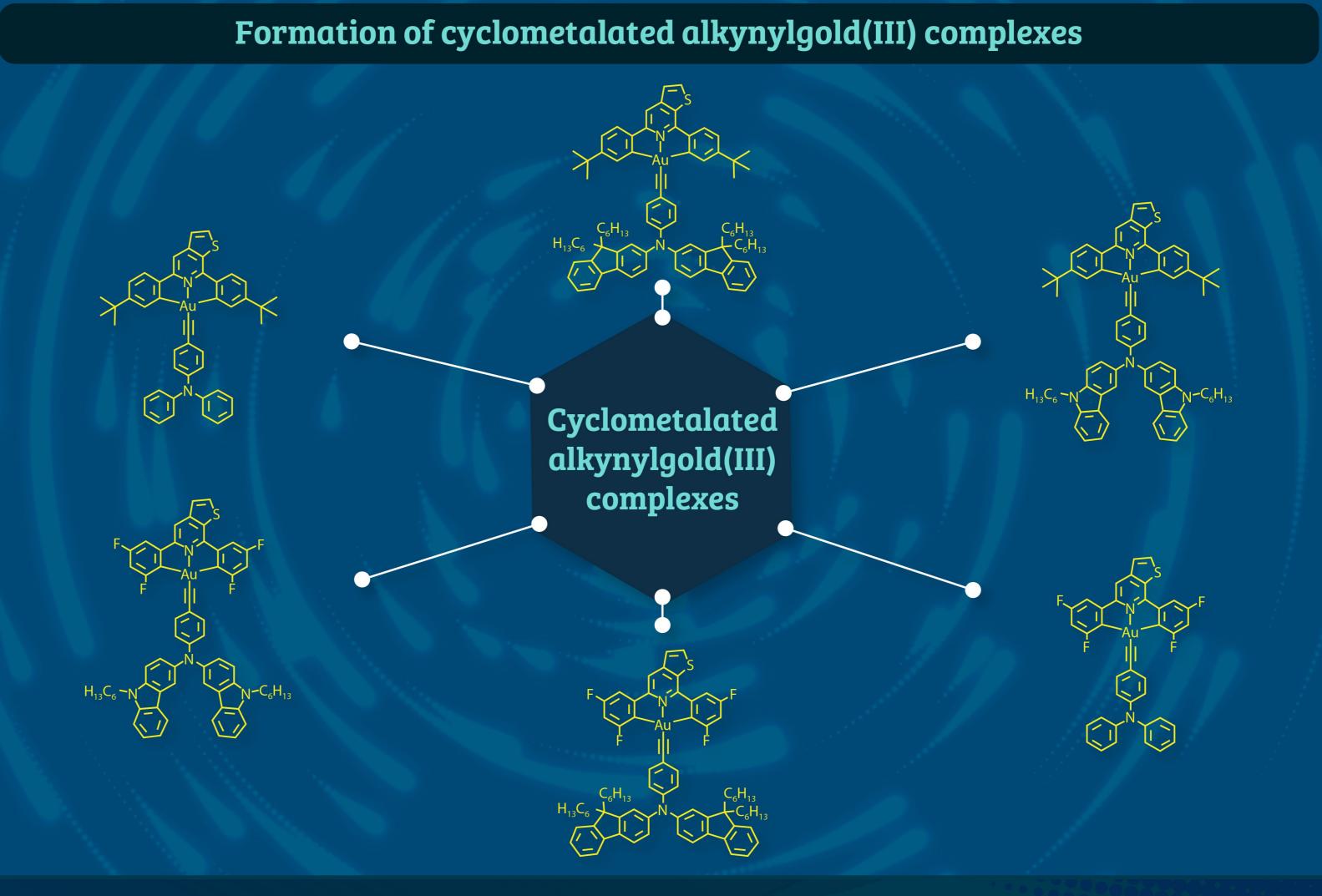




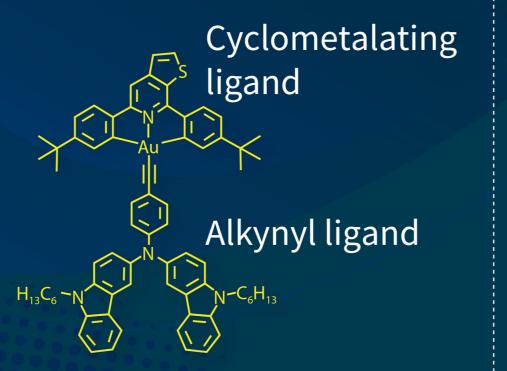
Compounds exhibiting thermally activated delayed fluorescence (TADF) can act as emitters for ultra-high-definition organic light-emitting device (OLED) displays



Can highly emissive gold (III) TADF complexes be synthesized?



Choice of cyclometalating ligands and alkynyl ligands control energy gap between HOMO-LUMO



Lowest unoccupied molecular orbital (LUMO)

Energy gap tunes emission color

Highest occupied molecular orbital (HOMO)



Highly emissive yellow-to-red emitting TADF



Tunable emission colors



Emission intensity increases with temperature

Alkynyl gold complexes are effective TADF emitters suitable for application in OLEDs

