

Electronic Supplementary Information

## **Nickel complexes supported by quinoline-based ligands: synthesis, characterization and catalysis in the cross-coupling of arylzinc reagents and aryl chlorides or aryltrimethylammonium salts**

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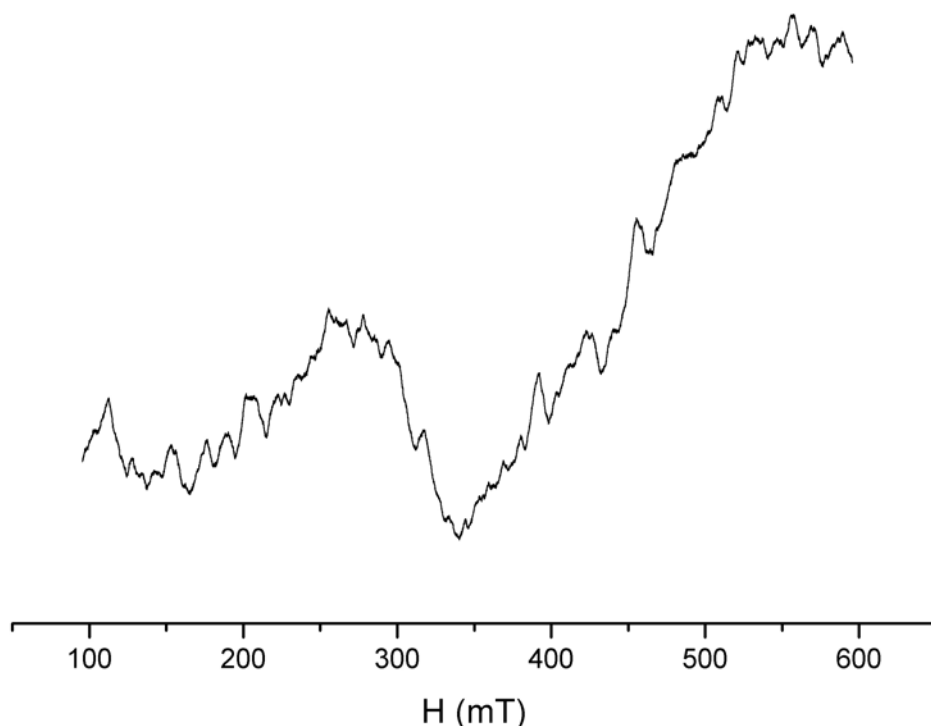
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### **Determination of ESR and UV spectra of complexes 2a, 7, 9, 11 and 13**

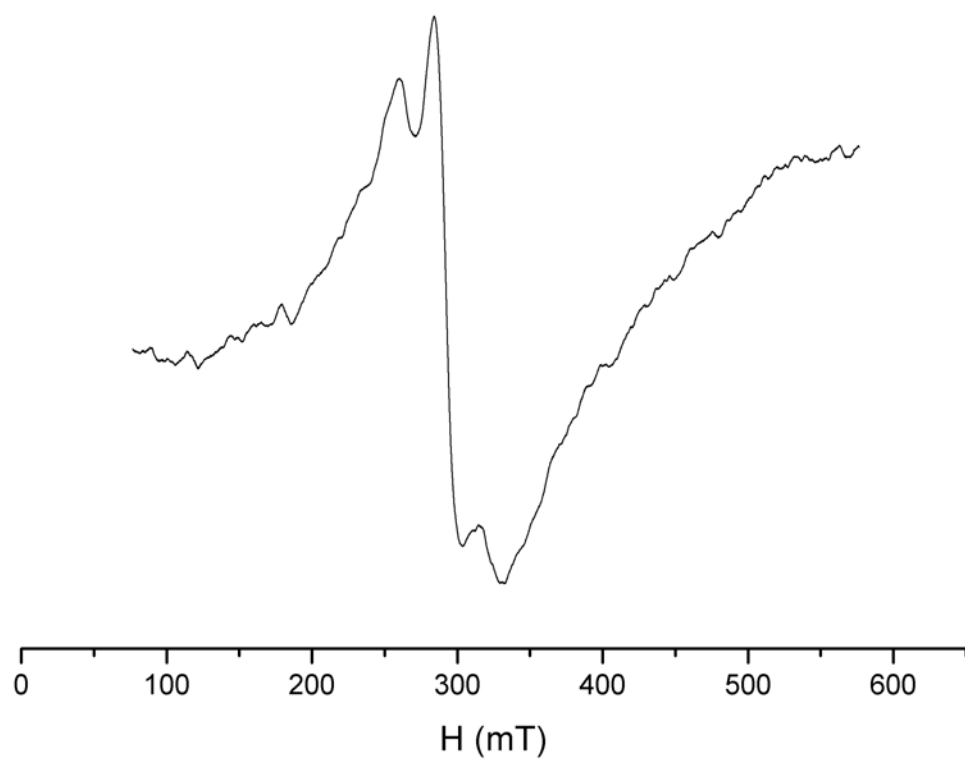
The ESR spectra of complexes **2a**, **7**, **9**, **11** and **13** were determined using solid samples on JES-FA200 (JEOL) spectrometer at 298 K. The UV spectra of complexes **2a**, **7**, **9**, **11** and **13** were recorded in a CH<sub>2</sub>Cl<sub>2</sub> solution on TU-1901 (Beijing Puxi) spectrometer at 298 K.

### **The ESR spectra**

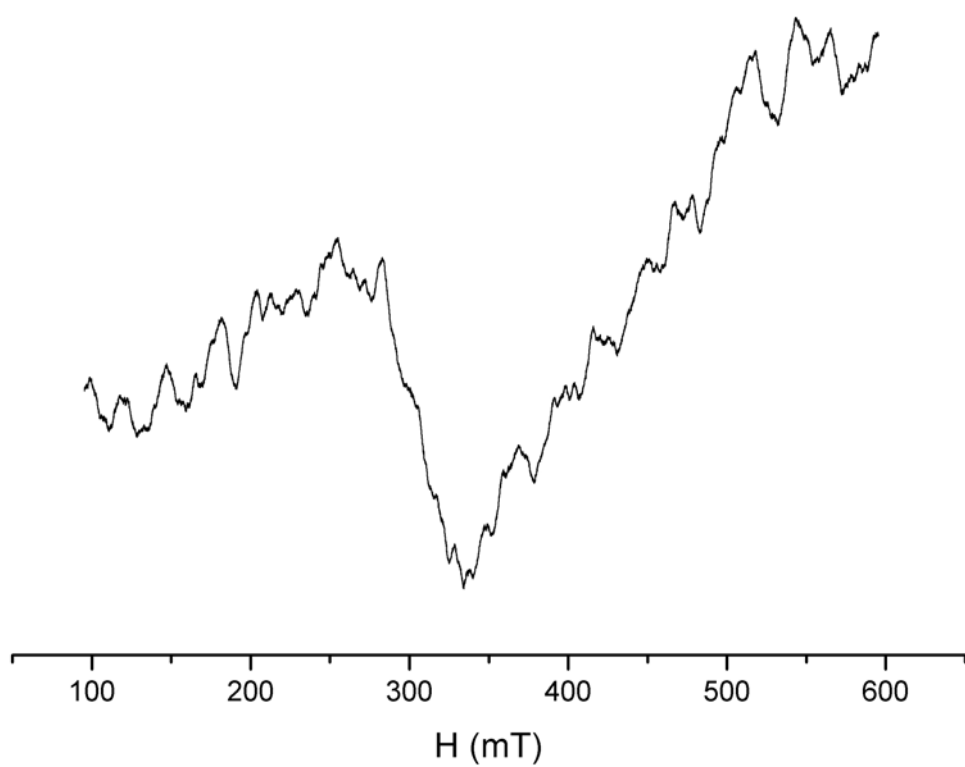
Complex **2a**:



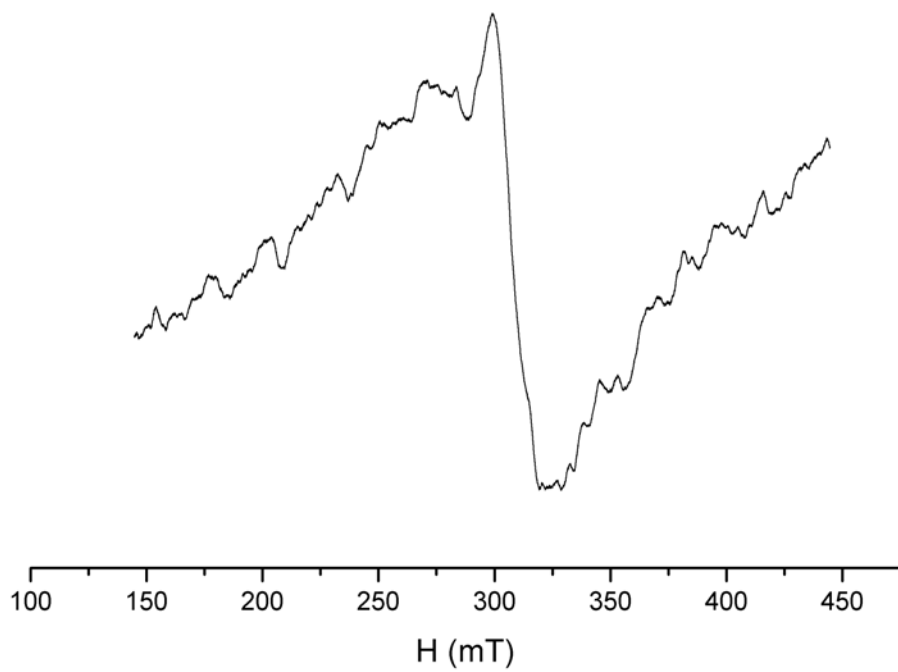
Complex **7**:



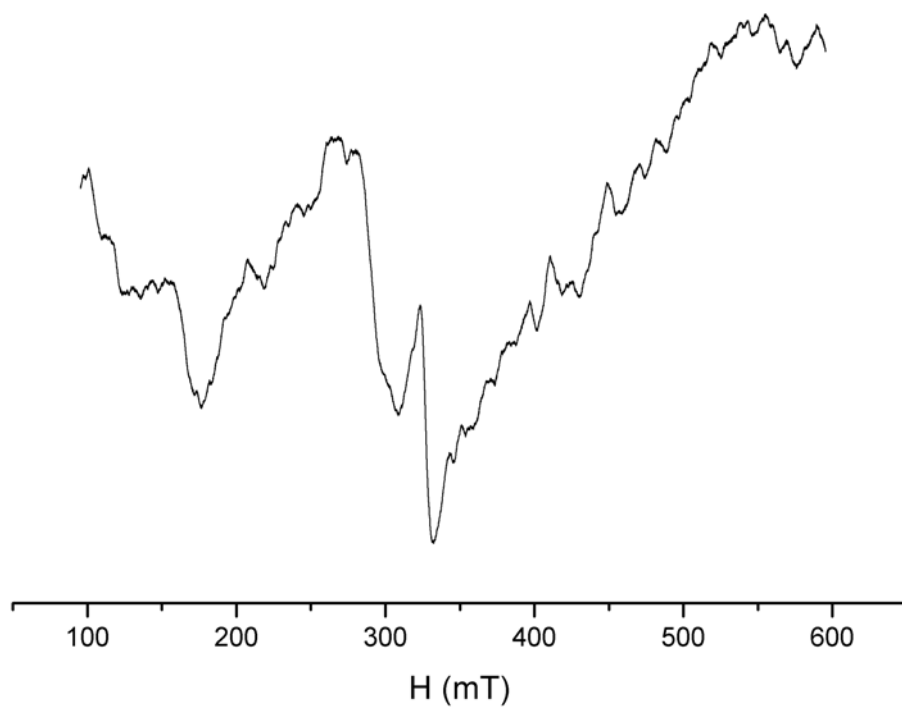
Complex **9**:



**Complex 11:**



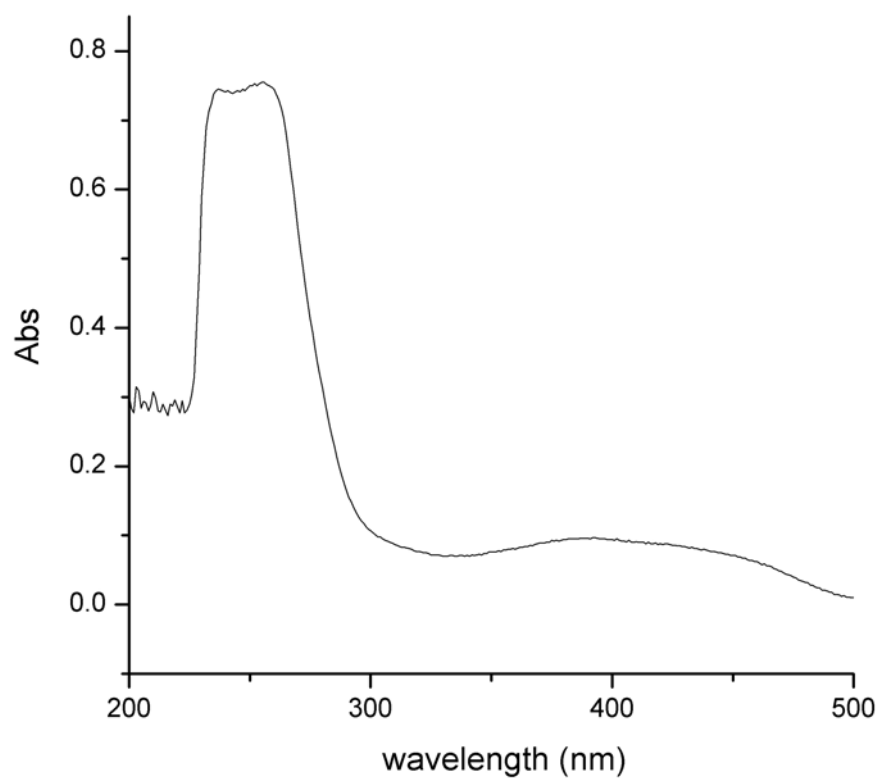
**Complex 13:**



## The UV spectra

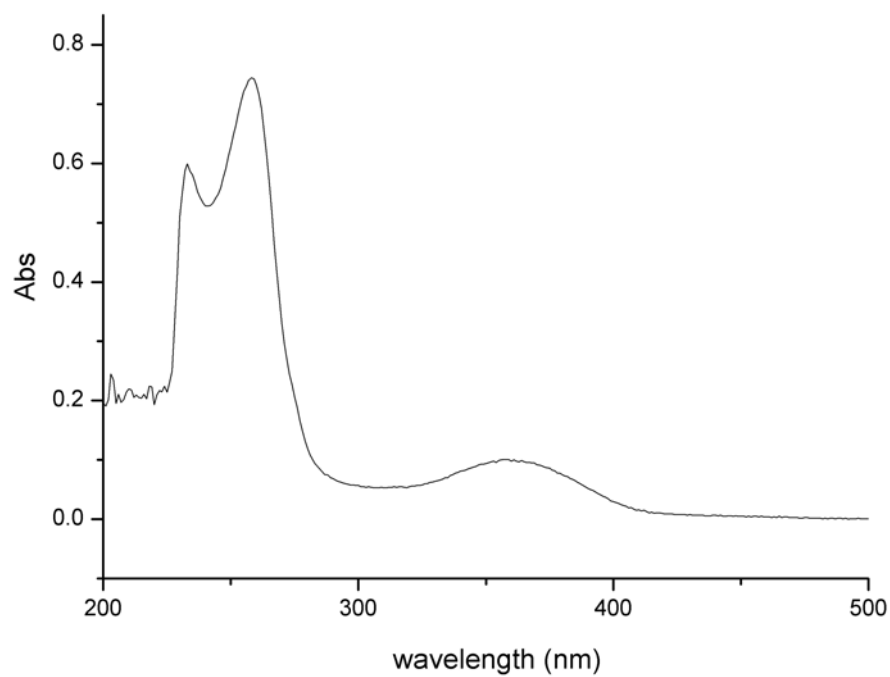
Complex **2a**:

$\lambda_{\text{max}} = 256 \text{ nm}$ ;  $\epsilon = 45300$ .



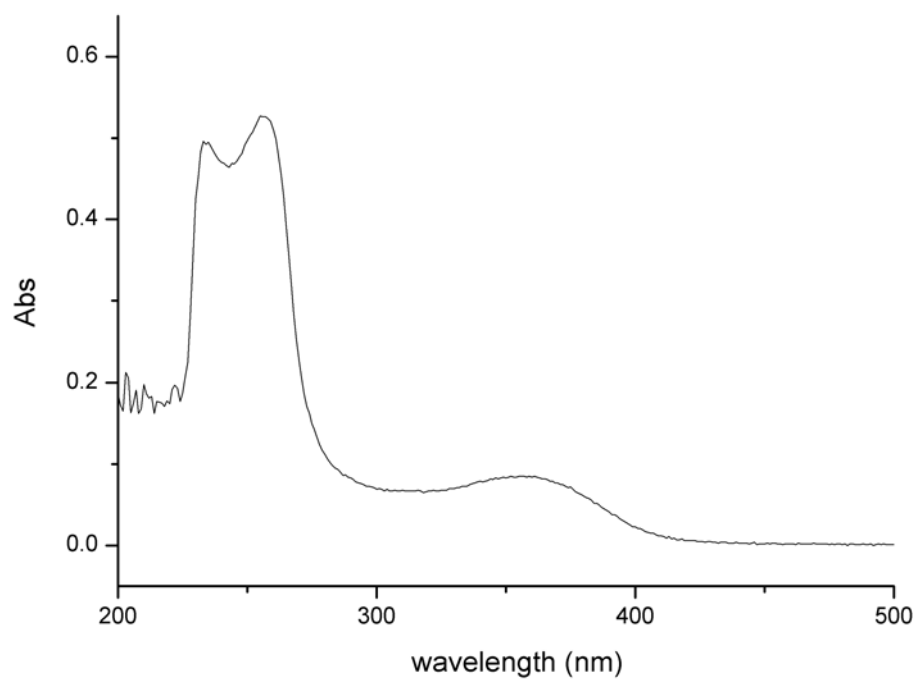
Complex **7**:

$\lambda_{\text{max}} = 233 \text{ nm}$ ,  $\epsilon = 41480$ ;  $\lambda_{\text{max}} = 258 \text{ nm}$ ,  $\epsilon = 51520$ .



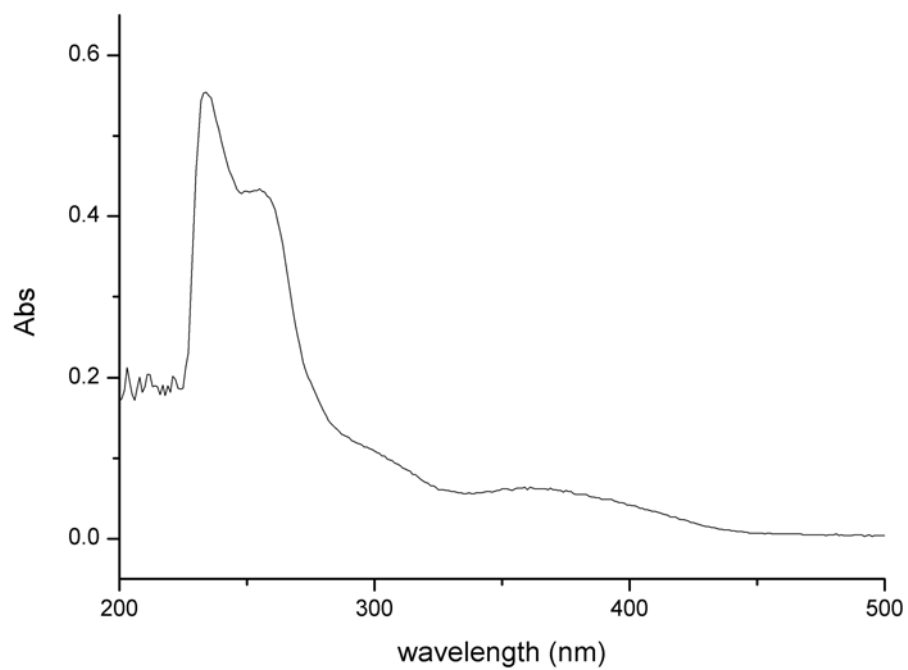
**Complex 9:**

$\lambda_{\text{max}} = 233 \text{ nm}, \epsilon = 23060; \lambda_{\text{max}} = 255 \text{ nm}, \epsilon = 24500.$



**Complex 11:**

$\lambda_{\text{max}} = 234 \text{ nm}, \epsilon = 45430.$



**Complex 13:**

$\lambda_{\max} = 233 \text{ nm}, \epsilon = 46440$ ;  $\lambda_{\max} = 259 \text{ nm}, \epsilon = 55900$ .

