

## Graphical Abstract

### Selective Synthesis of New Half-Lantern Benzoquinolate Platinum Complexes. DFT and Photophysical Studies on the Platinum (II,II) Derivative.

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The half-lantern compound *anti*-[Pt(bzq)( $\mu$ -C<sub>7</sub>H<sub>4</sub>NOS- $\kappa$ N,S)]<sub>2</sub> (**2**) was selectively prepared and oxidized with halogens (X<sub>2</sub>) to give the diplatinum (III) complexes [Pt(bzq)( $\mu$ -C<sub>7</sub>H<sub>4</sub>NOS- $\kappa$ N,S)X]<sub>2</sub> (X = Cl **3**, Br **4**, I **5**). Complex **2** exhibits intense luminescence at room temperature ( $\Phi$  = 90%) which was interpreted with the help of TD-DFT calculations.

