

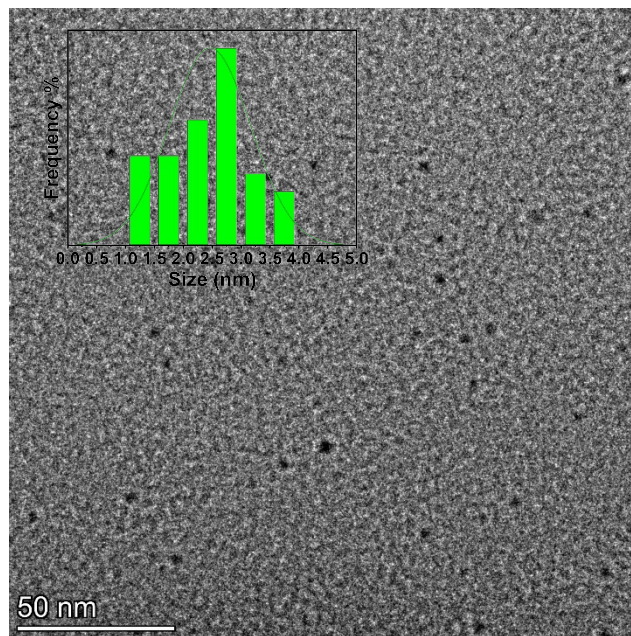
## Supplementary Information

### Mechanochemically-Mediated Dynamic Imine Bond Conjugation for Drug Delivery Using Carbon Dots

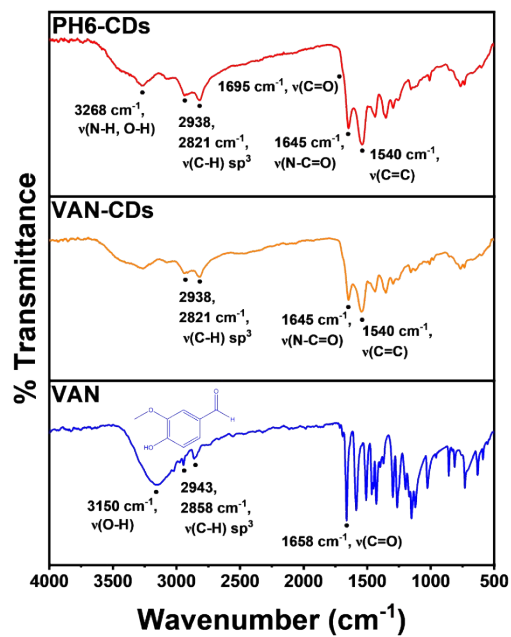
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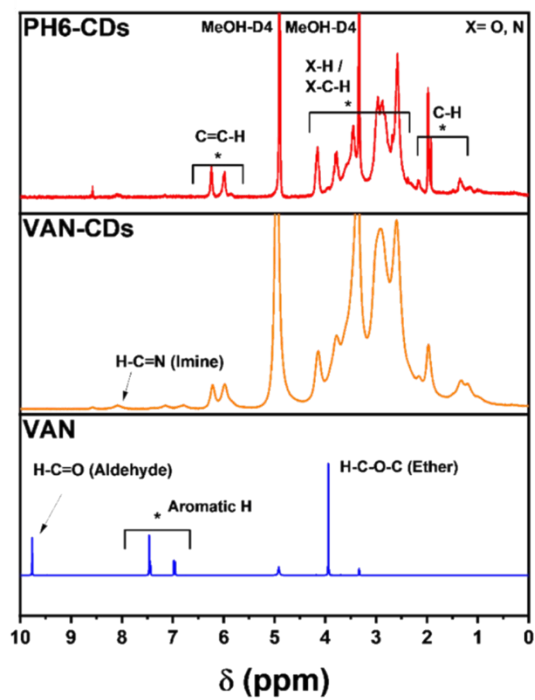
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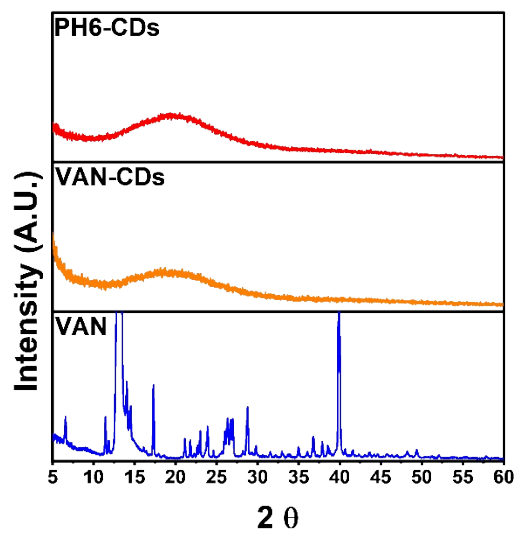
**Fig. S1** TEM image of PH6-CDs with associated size distribution histogram (CD average size:  $2.5 \text{ nm} \pm 0.7 \text{ nm}$ ).



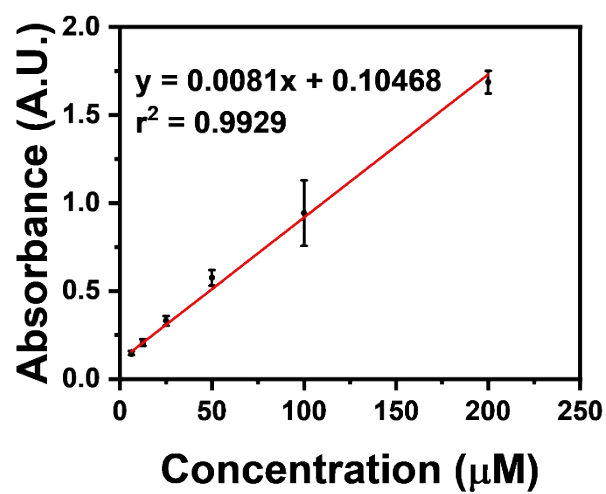
**Fig. S2** FT-IR of PH6-CDs, VAN-CDs and VAN to investigate conjugation of VAN.



**Fig. S3**  $^1\text{H}$ -NMR carried out to determine formation of imine bonds (300 MHz, MeOD).



**Fig. S4** PXRD of PH6-CDs, VAN-CDs and VAN to assess changes in crystallinity after conjugation.



**Fig. S5** VAN standard curve obtained with absorbance readings at 275 nm with corresponding calibration equation. Error bars are a direct representation of uncertainty in the data based upon triplicate experiments.