## Supporting Information

# Ultraviolet-Pumped White Light Emissive Carbon Dot Based Phosphors for Light-Emitting Devices and Visible Light Communication 

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Figure S1. Full survey XPS spectra of B-CDs, G-CDs and R-CDs.


Figure S2. $\mathrm{C}_{1 \mathrm{~s}}$ XPS spectra of B-CDs, G-CDs and R-CDs.


Figure S3. $\mathrm{N}_{1 \mathrm{~s}}$ XPS spectra of B-CDs, G-CDs and R-CDs.


Figure S4. $\mathrm{O}_{1 \mathrm{~s}}$ XPS spectra of B-CDs, G-CDs and R-CDs.


Figure S5. Formation process of white light emissive CD-based phosphors from the B-CDs, G-CDs, R-CDs and aqueous sodium silicate solutions mixture under microwave assisted treatment.


Figure S6. SEM images of non-grinded CD-based phosphors: (a) P-1, (b) P-2 and (c) P-3.

Table S1. PLQYs of white light emissive CD-based phosphors at 375 nm excitation and their corresponding mass ratios of B-CDs : G-CDs : R-CDs.

| Sample | PLQYs | Mass <br> ratios |
| :---: | :---: | :---: |
| P-1 | 0.31 | $20: 10: 1$ |
| P-2 | 0.33 | $10: 10: 1$ |
| P-3 | 0.31 | $5: 5: 1$ |

