

## Electronic Supplementary Information (ESI)

# Significance of oxygen on microwave-assisted synthesis of carbon quantum dots from polyethylene glycol

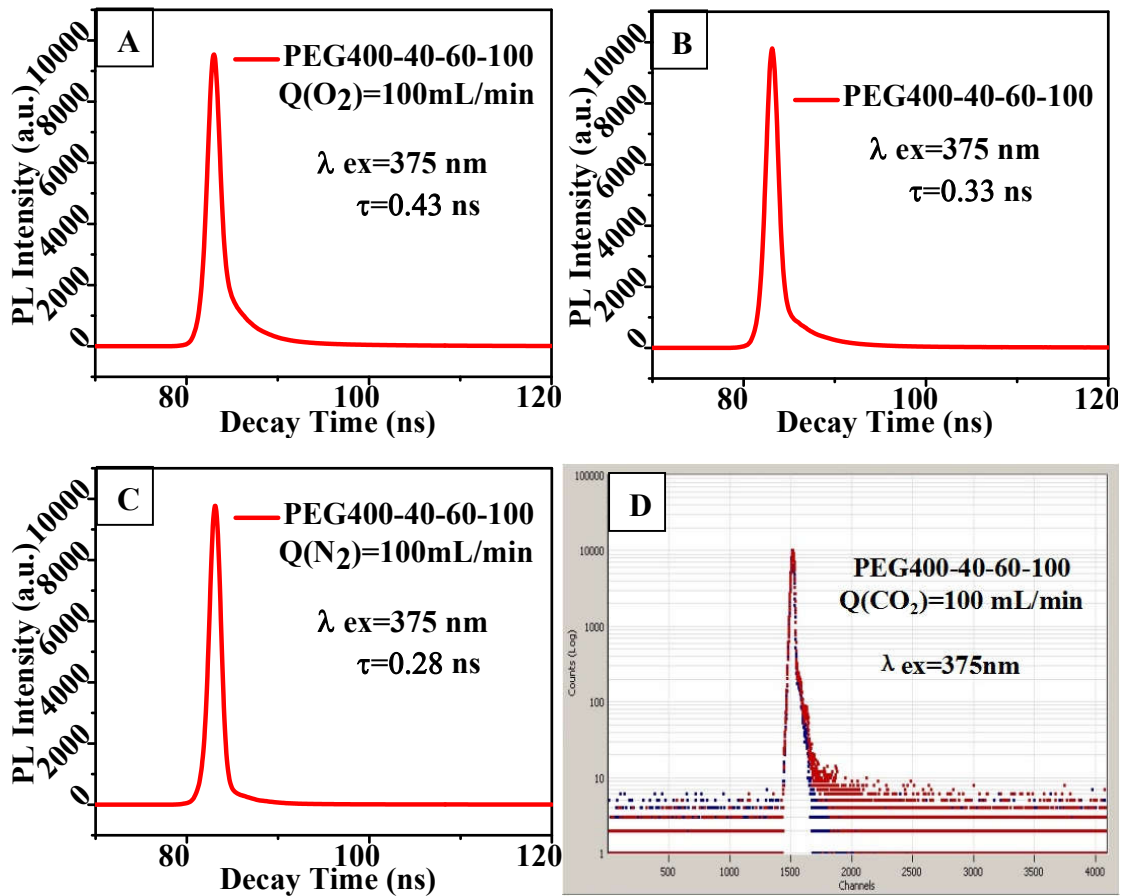
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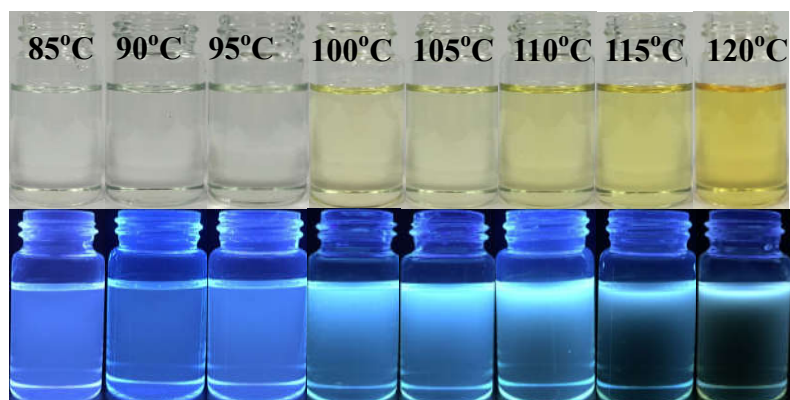
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**Fig. S1** The fluorescence decay curve of CQDs synthesized under different gas atmospheres.



**Fig. S2 Optical images of CQDs with different reaction temperatures under daylight (above) and 365 nm UV light (below).**

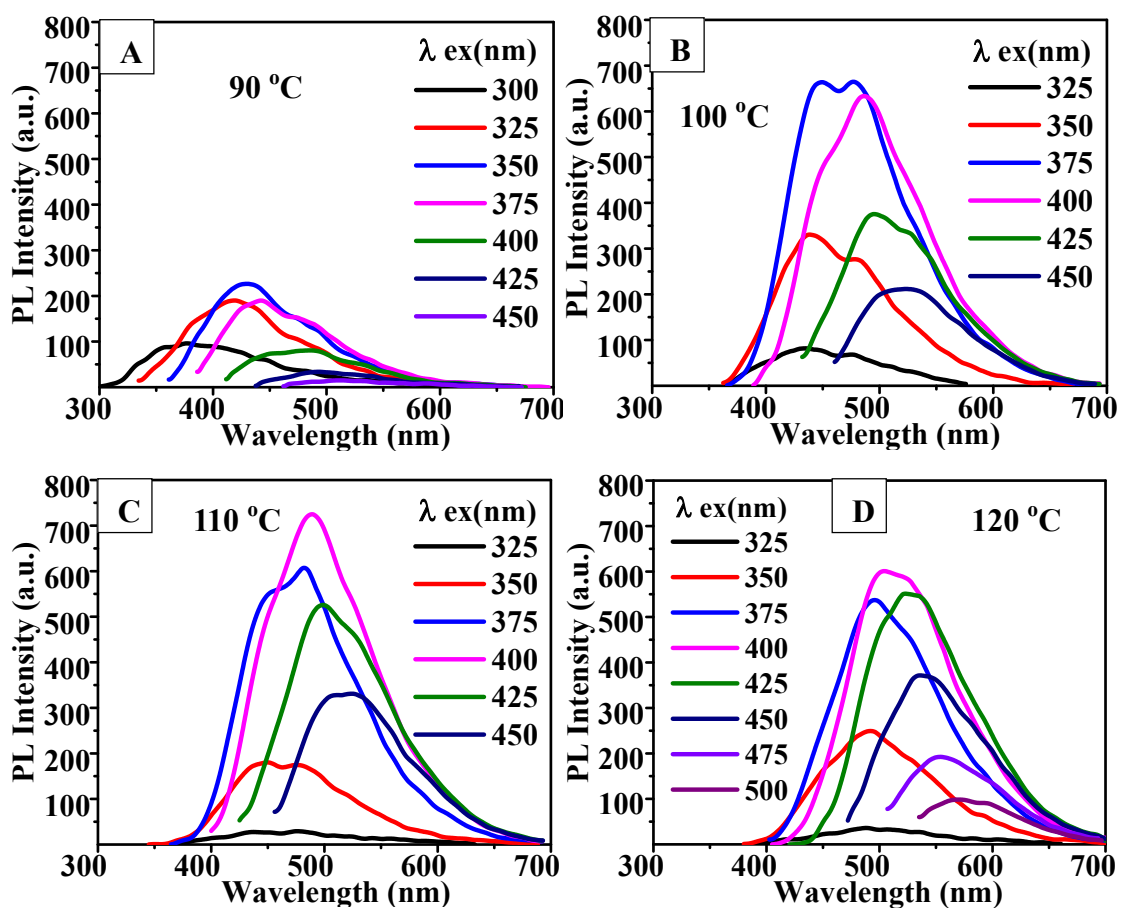


Fig. S3 Fluorescence emission spectra of CQDs prepared for different reaction temperatures.

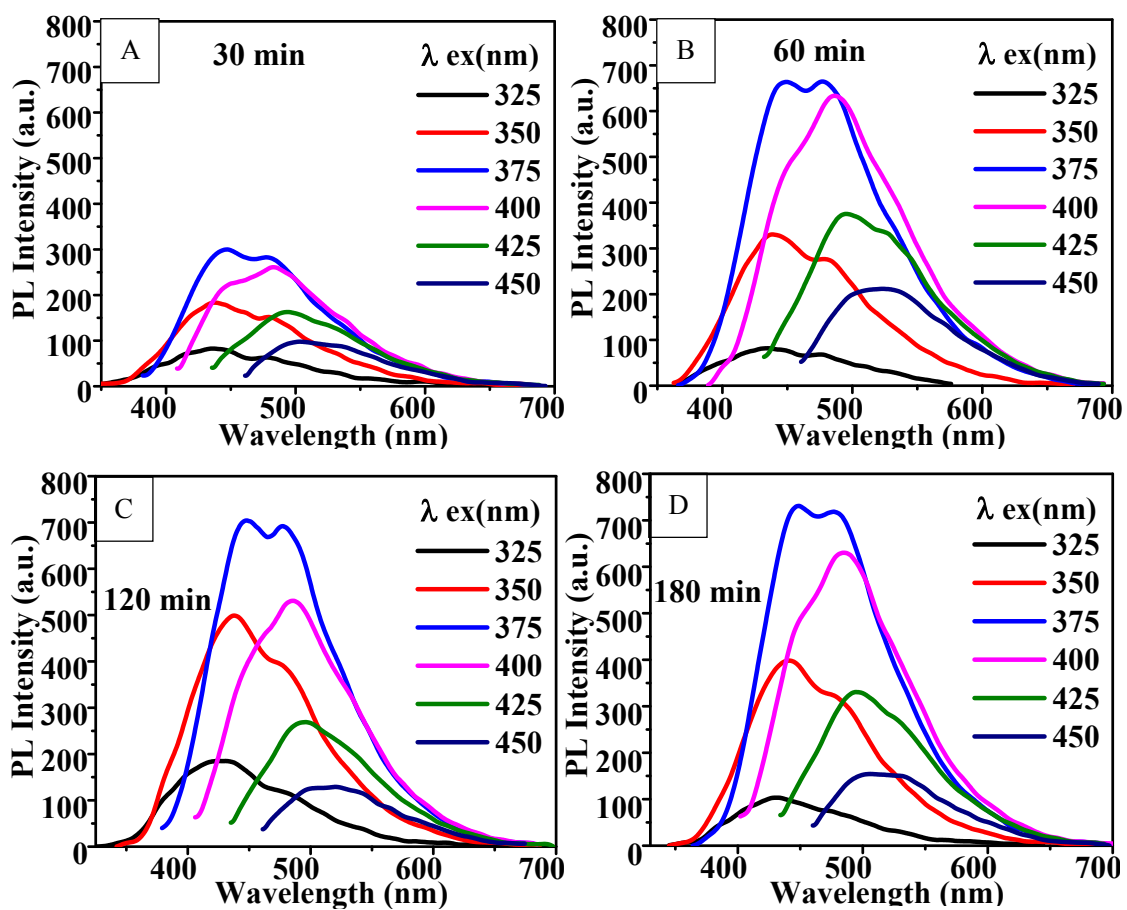


Fig. S4 Fluorescence emission spectra of CQDs prepared for different reaction times.

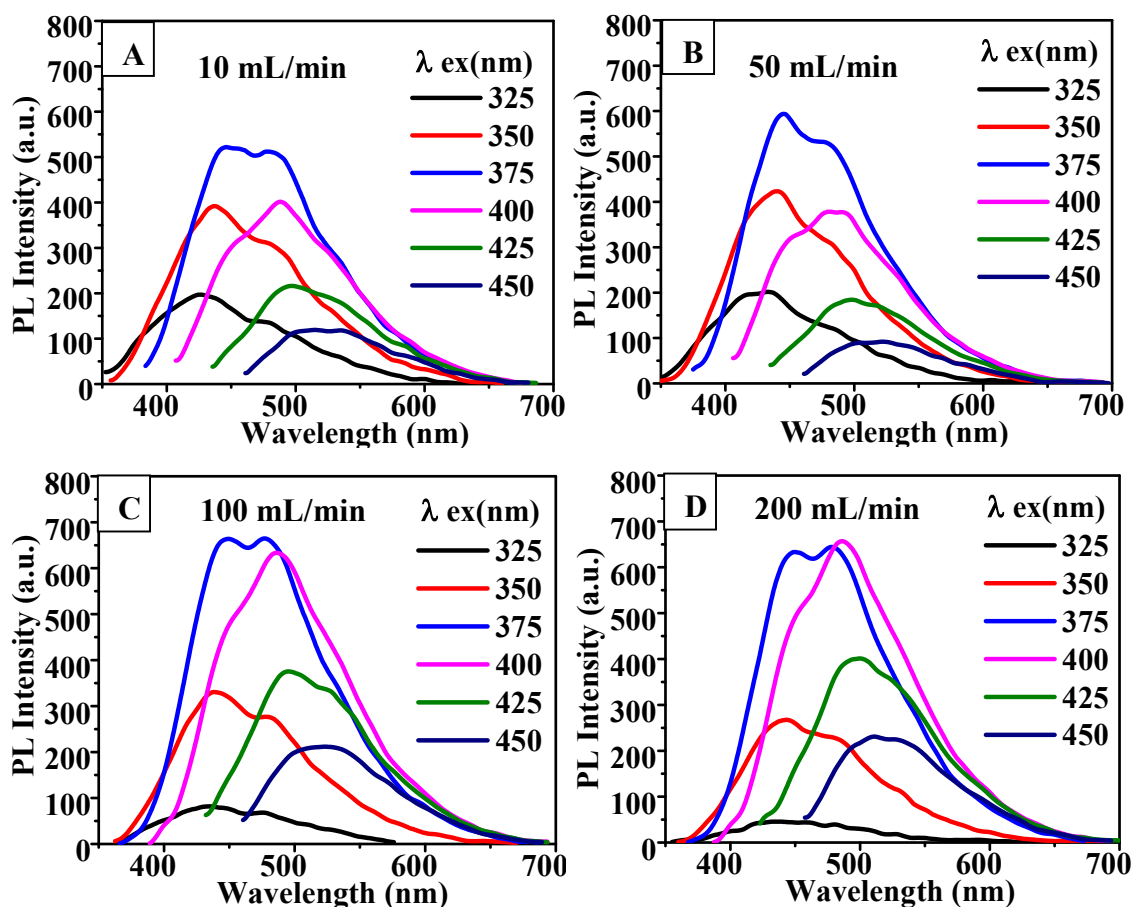


Fig. S5 Fluorescence emission spectra of CQDs prepared under different oxygen flow rate at 100 °C for 60 min.