# SUPPORTING INFORMATION

## Preferential Synthesis and Isolation of (6,5) Single-Wall Nanotubes from One-Dimensional $C_{60}$ Coalescence

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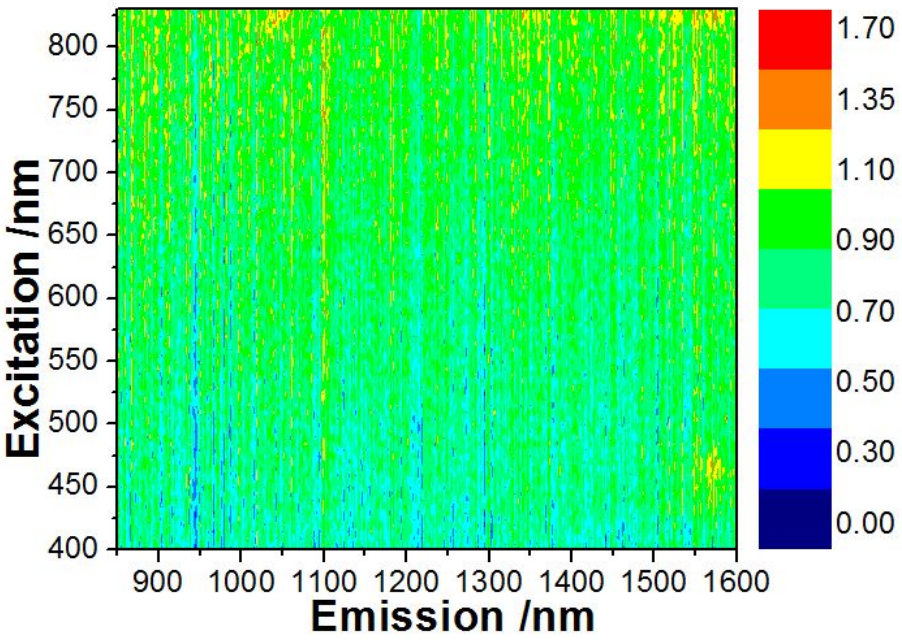
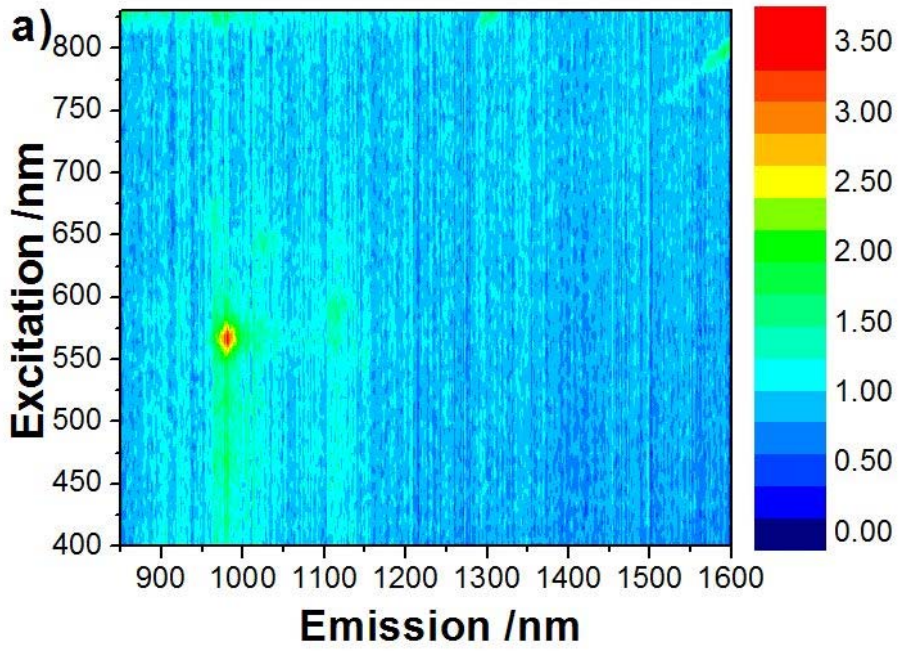
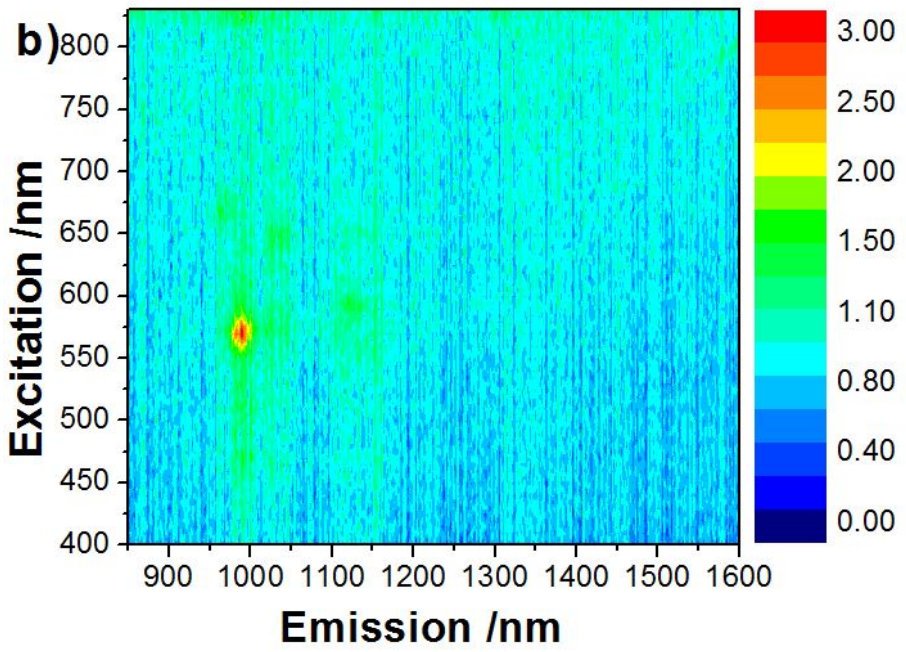



**Fig. S1** 2D PL contour map of the pristine nanotubes

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750
700
650
600
550
500
450
400
900 1000 1100 1200 1300 1400 1500 1600
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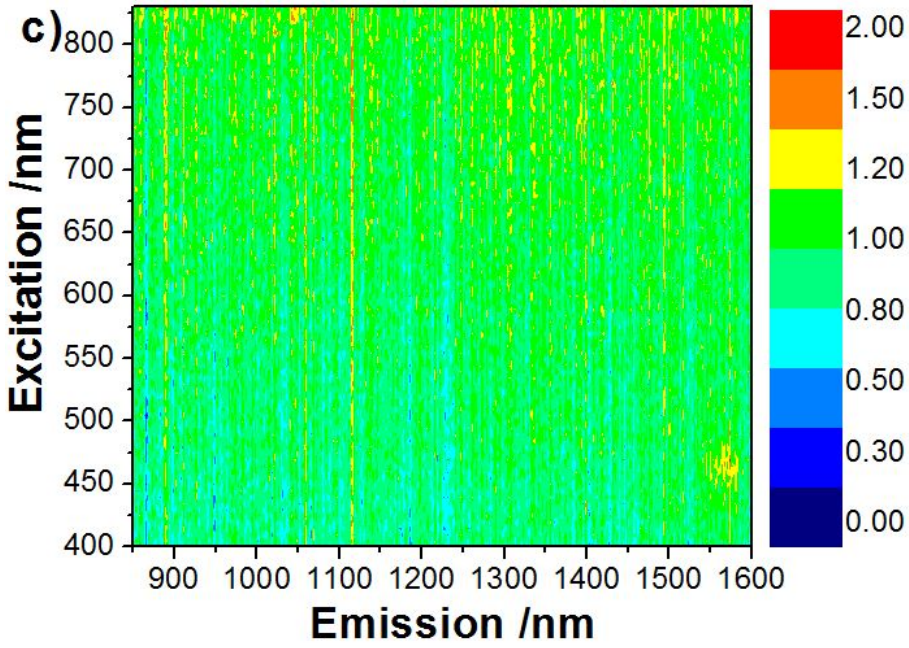
2.50
2.00
1.50
1.10
0.80
0.40
0.00


c)
Excitation /nm
800
750
700
650
600
550
500
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400
900 1000 1100 1200 1300 1400 1500 1600
Emission /nm
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1.20
1.00
0.80
0.50
0.30
0.00

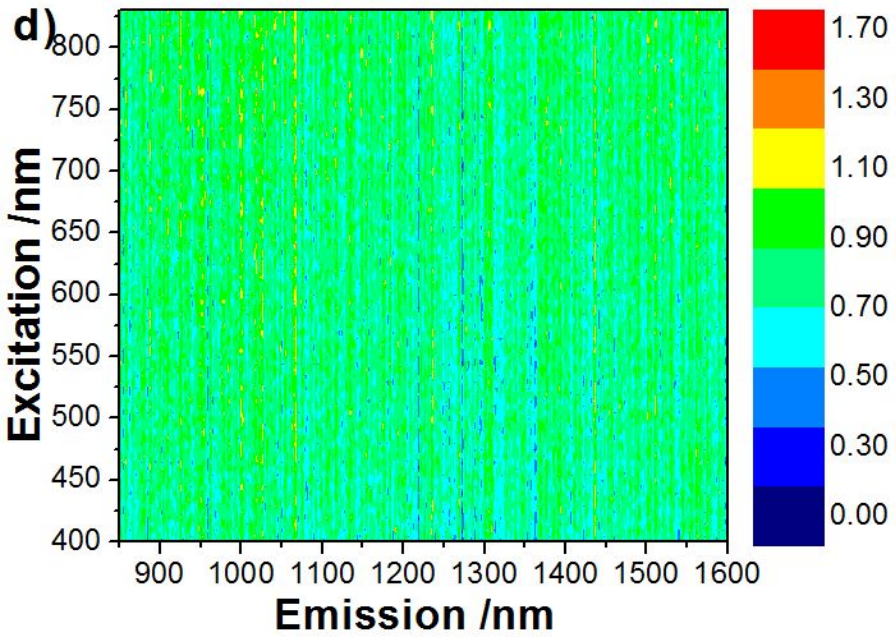


**Fig. S2** 2D PL contour maps of the extracted fractions corresponding to a) b1 b) b3 c) b4 d) b5 of **Fig. 2 b**

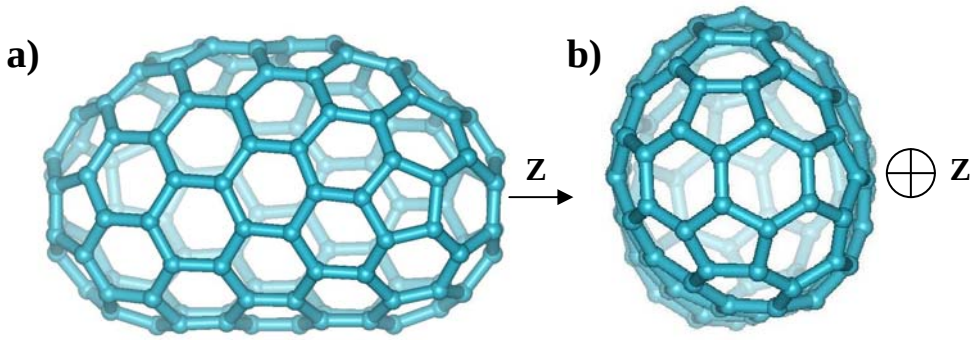


**Fig. S3** Modeling structure of $C_{120\_(9,1)}$ a) side view b) left view

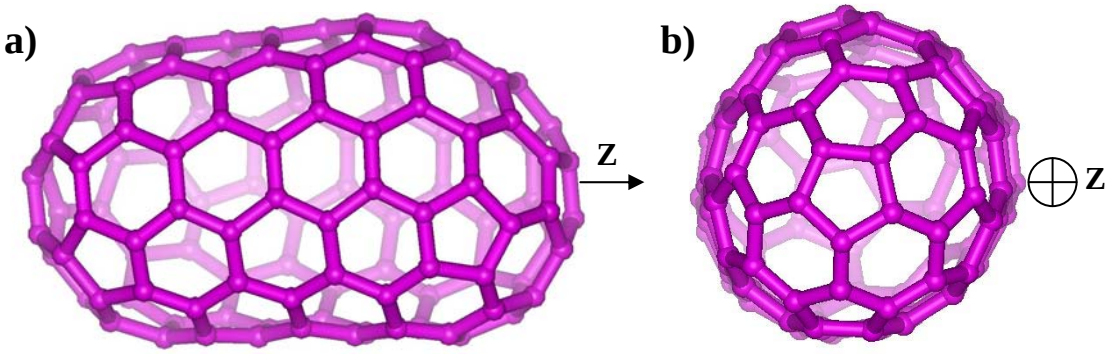


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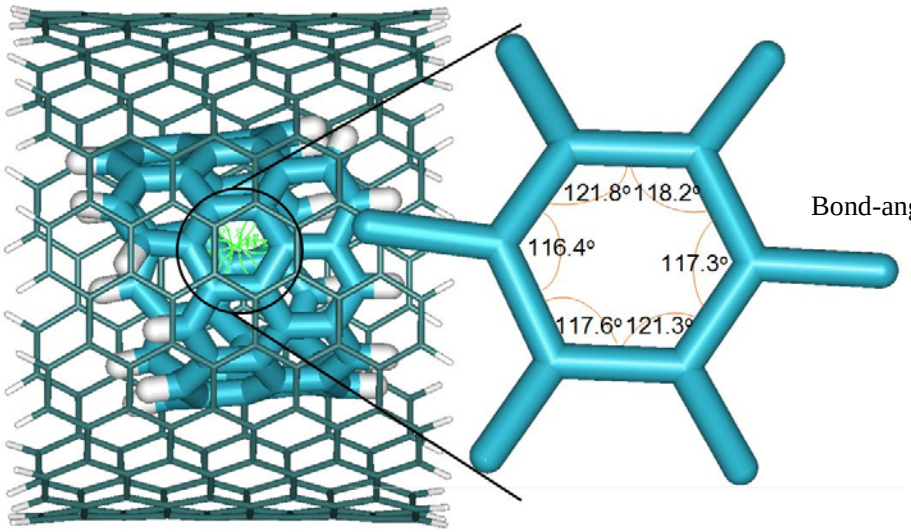
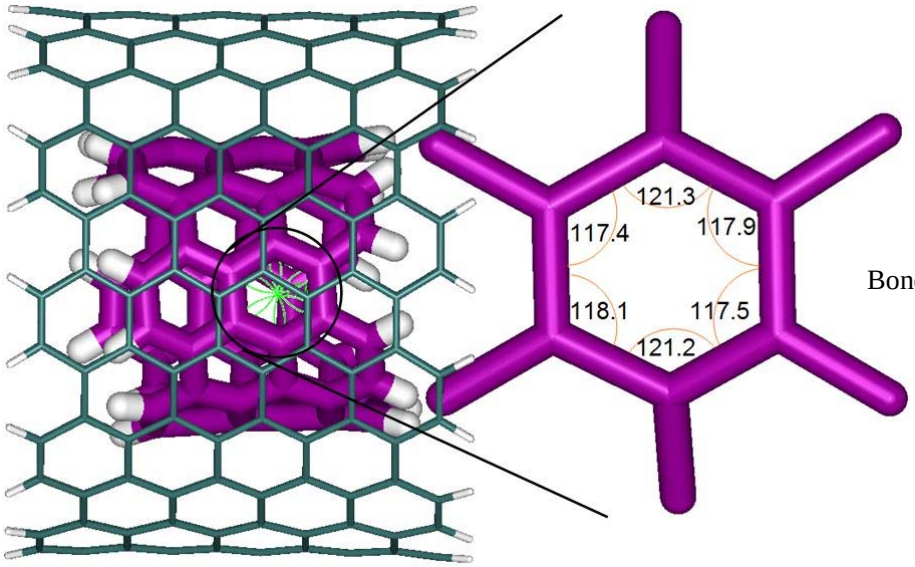
**Fig. S4** Modeling structure of $C_{120\_(6,5)}$ a) side view b) left view




Bond-angle=118.7±2.2°

**Fig. S5** Modeling structure of (9,1)@(11,11)




Bond-angle=118.9±1.8°

**Fig. S6** Modeling structure of (6,5)@(11,11)

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