

# Highly Efficient Antibacterial Polymer Composites Based on Hydrophobic Riboflavin Carbon Polymerized Dots

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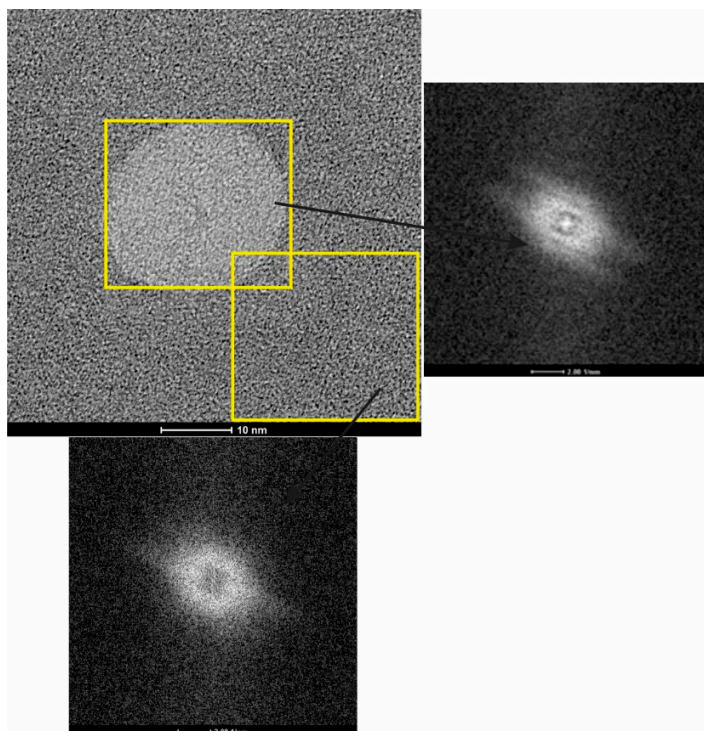
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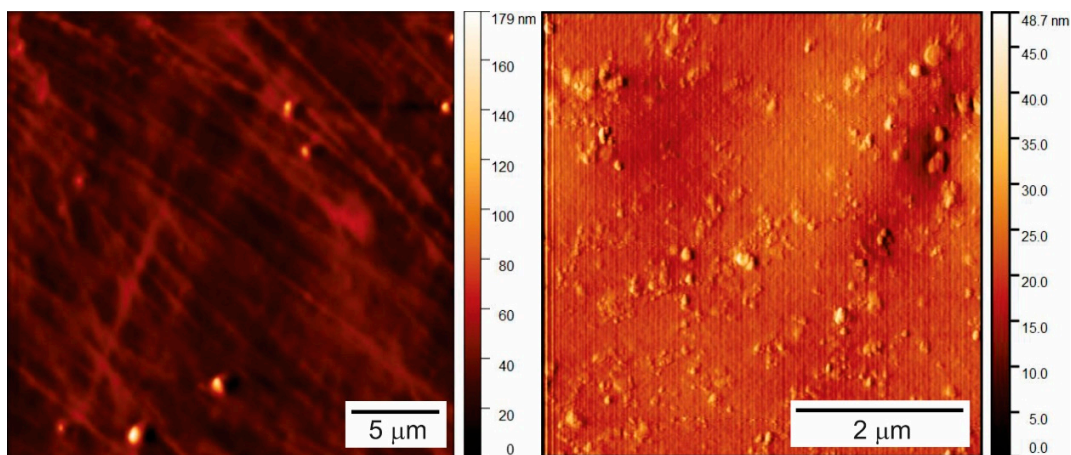
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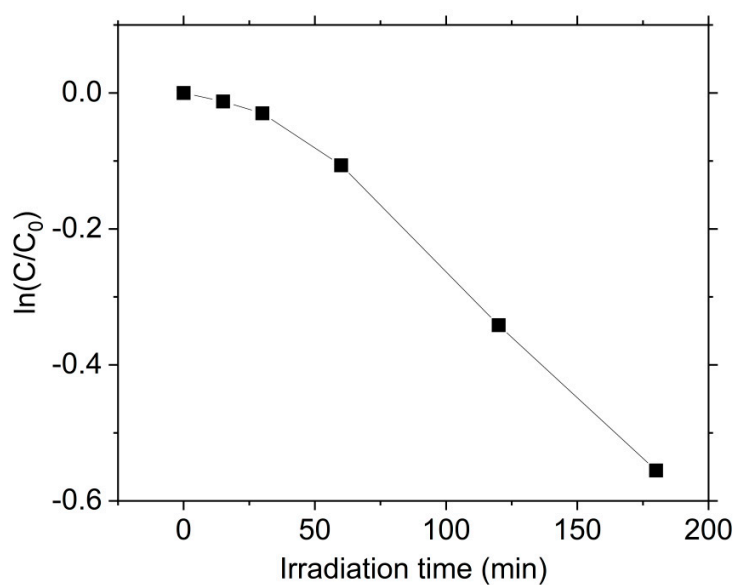
**Figure S1.** HRTEM micrograph and corresponding electron diffraction patterns of RF-CPDs and TEM supporting grid.



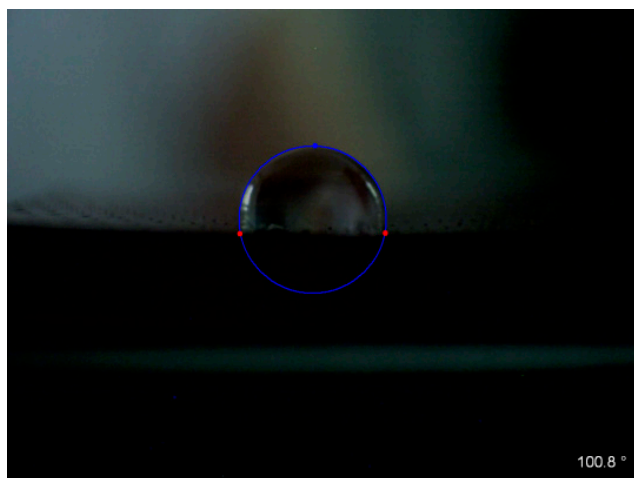
**Figure S2.** Top view AFM images of a) neat PU and b) RF-CPDs/PU composites.

**Table S1.** Characteristic bonds detected in the RF-CPDs samples.

Characteristic bonds	Binding energy (eV)	At%
C 1s peak $sp^2$	284.42	31
C 1s peak $sp^3$	285.40	48.7
C 1s peak C=O	286.81	20.3
O 1s peak C=O	531.68	100
N 1s peak pyridinic	399.01	45.40
N 1s peak pyrrolic	400.16	48.60
N 1s peak C=N-C	396.72	6.00



**Figure S3.** Kinetic rate of RB degradation rate in the presence of RF-CPDs/PU composite under blue light irradiation.



**Figure S4.** Contact angle measurement of water drop on RF-CPD/PU composites.