Electronic Supplementary Material (ESI) for Materials Advances.

One-step simultaneous liquid phase exfoliation-induced chirality in graphene and their Chirality-mediated microRNA delivery

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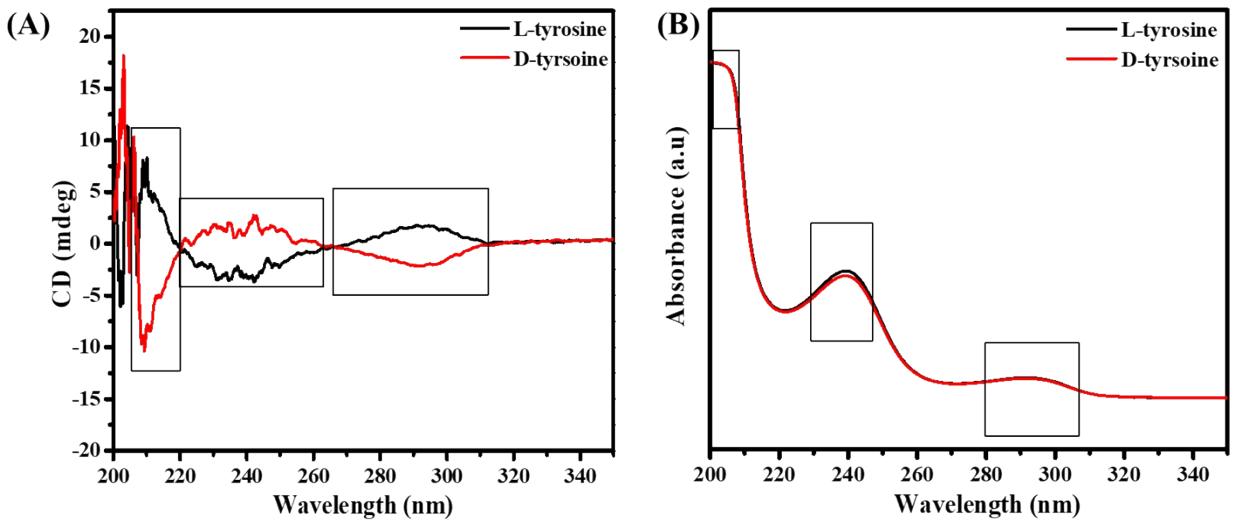

Figure S1. (A) CD spectra of L-tyrosine and D-tyrosine and (B) UV absorbance of L-tyrosine and D-tyrosine.

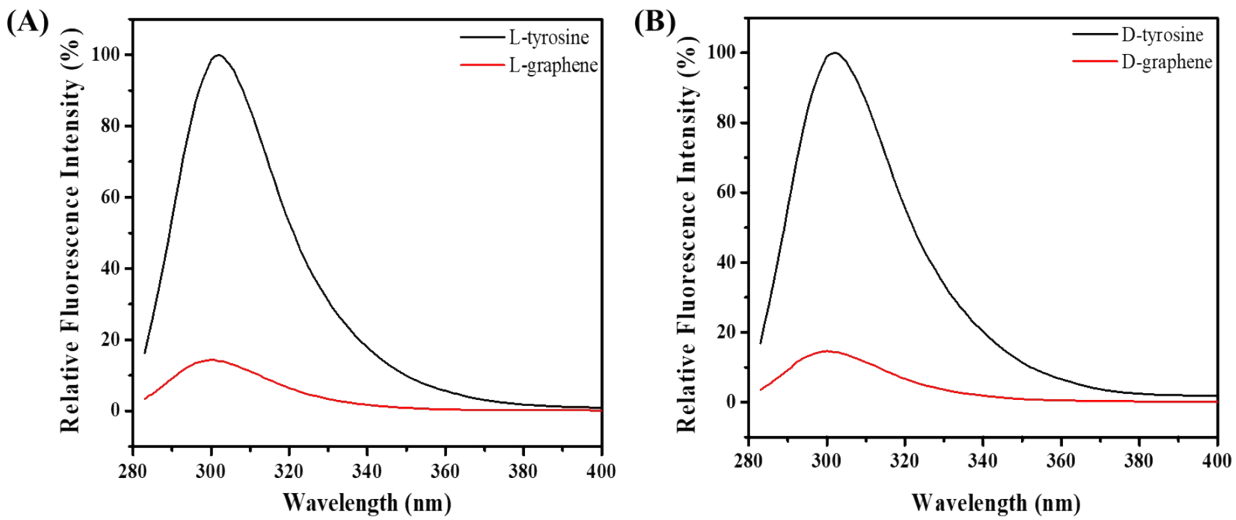

Figure S2. Relative fluorescence quenching of (A) L-tyrosine and L-graphene and (B) D-tyrosine and D-graphene.

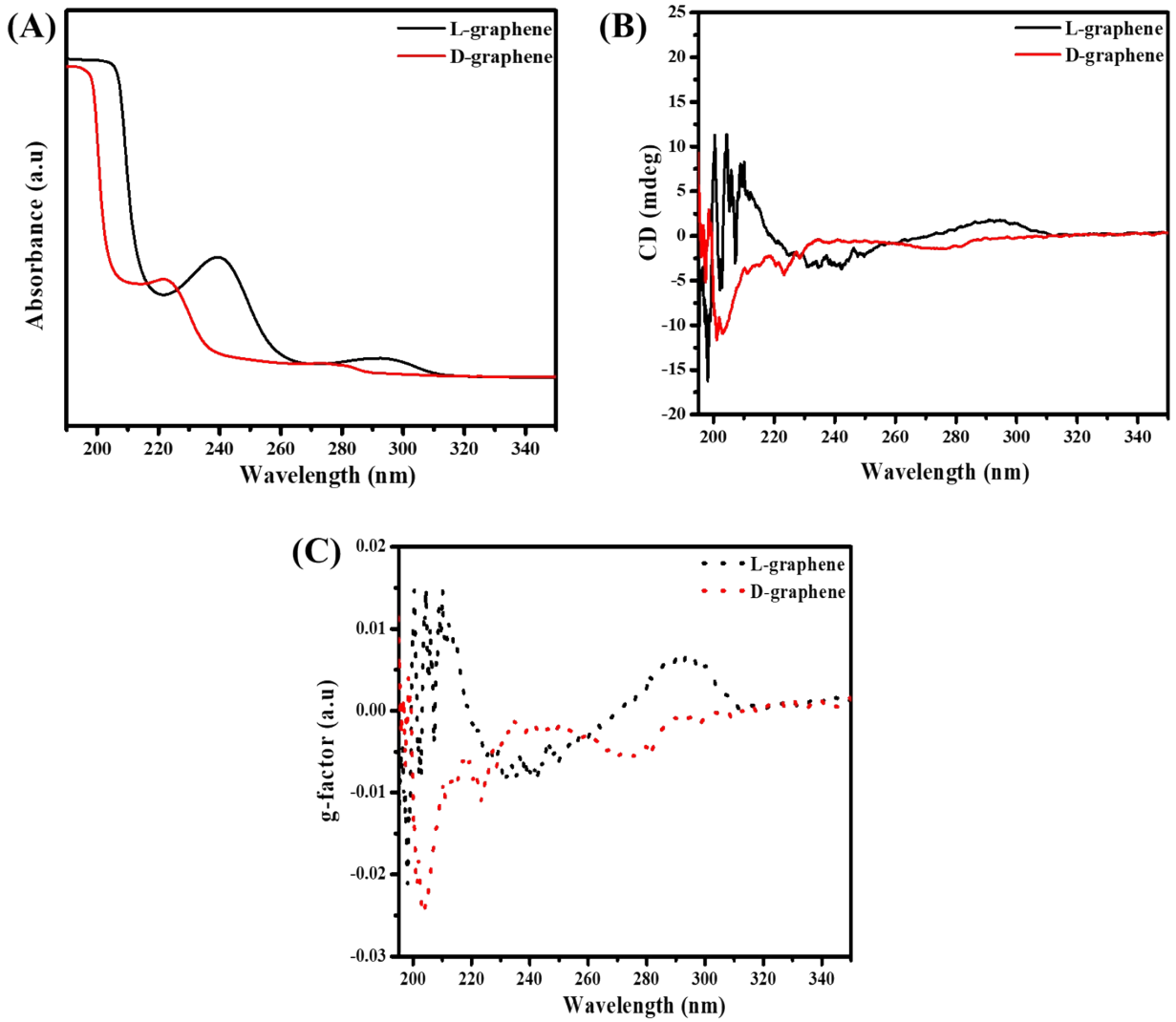

Figure S3. (A) UV absorbance of L-graphene and D-graphene, (B) CD spectra of L-graphene and D-graphene, and (C) A symmetry (g-factor) of L-graphene and D-graphene after 30 days.

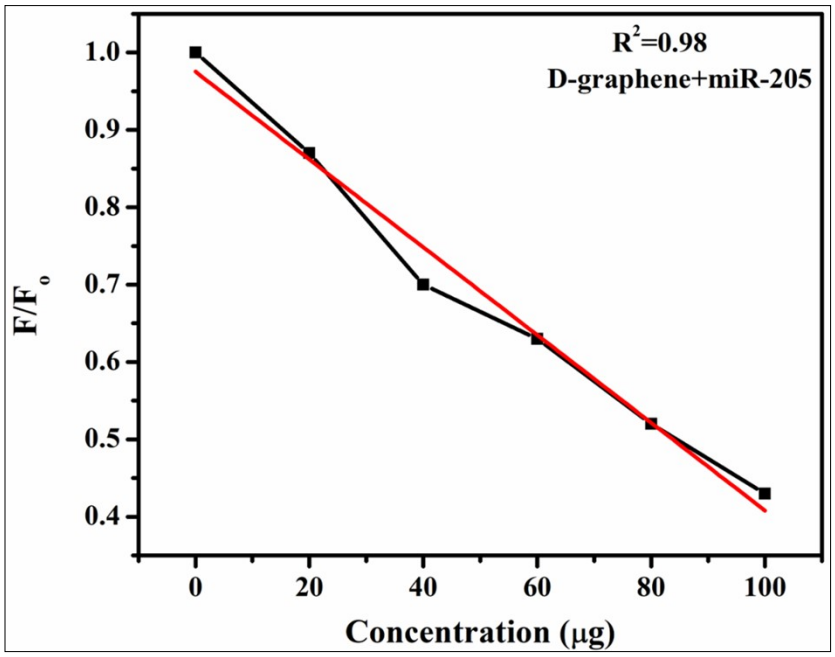

Figure S4. The linearity of D-graphene interacted with FAM-miR-205 calculated from fluorescence spectrum of D-graphene with FAM-miR-205.

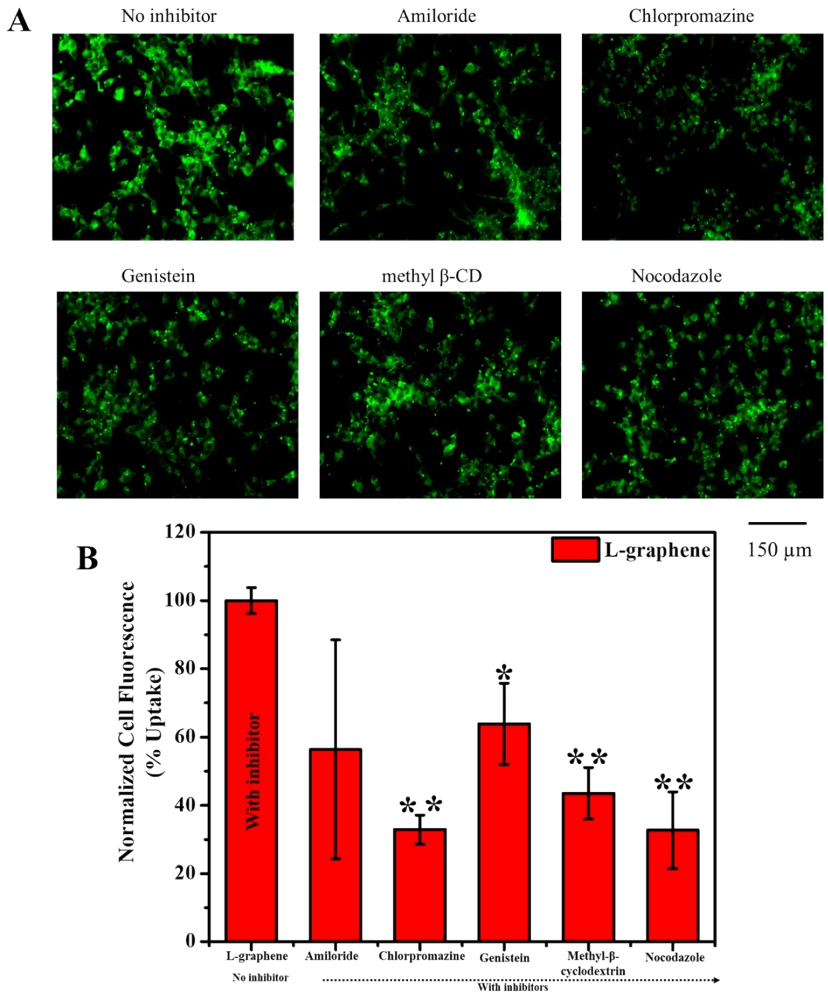

Figure S5. Uptake of L-graphene in the presence of inhibitors. Normalized cell fluorescence (% uptake) values of L -graphene in presence of No inhibitors and inhibitors. *P < 0.05, **P < 0.01 *vs.* No inhibitor.

Table S1. EDX composition of L-Graphene and D-Graphene.

L-graphene		D-graphene	
Carbon	93.98%	Carbon	88.61
Nitrogen	0.23%	Nitrogen	1.44
Oxygen	2.64%	Oxygen	4.36

Table S2: Hydrodynamic diameter (D_H), Polydispersity (PdI) and Zeta Potential (mV) of L-graphene and D-graphene.

L-graphene	D-graphene
Size-309.43±14.8 nm	Size-357.76±4.03 nm
Size-362.13±6.29 nm (after 30 days)	Size-346.4±1.08 nm (after 30 days)
PdI-0.35±0.072	PdI-0.386±0.0005
PdI-0.41±0.04 (after 30 days)	PdI-0.4±0.03 (after 30 days)
Zeta Potential - -38.57±0.08 mV	Zeta Potential - -37.24±0.33 mV
Zeta Potential - -28.88±1.2 mV (after 30 days)	Zeta Potential - -29.44±0.29 mV (after 30 days)