Supplementary Information:

Unravelling the in vivo biotoxicity of green-biofabricated Graphene Oxide-Microplastic hybrid mediated by proximal intrinsic atomic interaction

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Figure S1: Elemental composition analysis of GO@PS determined by EDAX analysis.



Figure S2: *In silico* analysis of interaction of GO and Styrene ;(A) Conformational interaction with bond (B) Confirmation interaction (C) Binding affinity of GO and Styrene.



Figure S3: Histogram presentation of flow cytometry analysis of side scatter in zebrafish cells exposed to (A) GO (B) PS.



Figure S4: Histogram presentation of flow cytometry analysis of DCFDA fluorescence presenting oxidative stress in zebrafish cells exposed to (A) GO (B) PS.



Figure S5: Histogram presentation of flow cytometry analysis of acridine orange fluorescence presenting apoptosis in zebrafish cells exposed to (A) GO (B) PS.

| MODES | BINDING AFFINITY (kcal/mol) |
|-------|------------------------------------|
| 1 | -6.0 |
| 2 | -5.7 |
| 3 | -5.5 |
| 4 | -5.5 |
| 5 | -5.3 |
| 6 | -4.8 |
| 7 | -4.7 |
| 8 | -4.7 |
| 9 | -4.6 |
| 10 | -4.5 |

Table S1: Interaction of industrial GO with Styrene