**Additional file:**

**Meta-analysis of Cellular Toxicity for Graphene via Data-Mining the Literature and Machine Learning**

**Supporting Information: table 1. Inclusion and exclusion criteria.**

|  |  |  |
| --- | --- | --- |
| **Exclusion criteria** | **Exclusion criteria (Secondary examination)** | **Inclusion criteria** |
| Review | Without diameter data | Graphene and its derivatives |
| Quantum Dots | Without exposure dose data | In vitro studies |
| Plants | Graphene scaffold | With cytotoxic results |
| Non-human or murine cells | Loaded with drug | With physiochemical parameters |
| Non-nano materials | Photothermal therapy (PTT) |  |
| Irrelated studies | Engineering applications |  |
| In vivo studies | Graphene acts on proteins |  |
| Bacteria | Graphite Electrode |  |
| Carbon Nano Tube | Without cell viability |  |

**Supporting Information:** **Figure 1. Linear Regression of the macroscopic properties.** We used Linear Regression to get statistically important features.



**Supporting Information: Figure 2. Linear Regression of the dummy variables .** We used Linear Regression to look into influential categories.



**Supporting Information: Figure 3. Heat map of the pairwise correlation between attributions.** “All” attributes were arranged on the abscissa and ordinate respectively, to get the correlation between different attributes.

