“剪贴术”搭建三维氧化石墨烯结构

**A Cut-and-paste Approach to 3D Graphene Oxide-based Architectures**

*Chong Luo*

Department of Materials Science and Engineering,

Northwestern & Tsinghua University

**Bio**

Chong Luo is a Ph.D. candidate of materials science and engineering at Tsinghua University in Quan-Hong Yang group. He was a visiting scholar at Northwestern University in Jiaxing Huang group from 2016 to 2018. His research is focus on the liquid-phase assembling and processing graphene-based bulk materials and its application in energy storage devices, dynamic structures and even safer cosmetics.

**Abstract**

Graphene Oxide (GO) is the material that can well dissolved in water. Therefore, stacked GO sheets (like a membrane) can be readily loosened up and even re-dispersed in water, which upon drying, restack to form solid structures. Therefore, water can be utilized to heal local damage, glue separated pieces, and release internal stress in bent GO papers to fix their shapes. Complex and dynamic 3D GO architectures can thus be fabricated by a cut-and-paste approach, which is also applicable to GO-based hybrid with carbon nanotubes or clay sheets.