

Chlorine-functionalized reduced graphene oxide for methylene blue removal

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Supporting Information

1. Table

Table S1 The atomic percentage of elements in CIRGO

Element	C	O	Si	S	Cl
Atomic%	73.83	21.64	0.94	0.16	3.43

2. The height of the spacer or pillaring agent

The height (H) of the spacer or pillaring agent consist of three parts (**Fig. S1**), e.g., the radius atom chlorine (r), the bond distance of carbon A and chlorine (R), the distance (h) between carbon atom A and the center O of geometric graphene sheet plane surface.

The sp² carbon atom B, C, and D are in the geometric plane of graphene sheet. The quasi sp³ carbon atom (A) locates above the plane.

The radius of this chlorine is longer than that (0.100 nm) of the chlorine atom. The set radius is 0.100 nm.

The bond distance (R) of carbon A and chlorine is 0.176 nm.

The single bond distance of carbon and carbon is 0.154 nm. The bond distance of carbon and carbon in graphite sheet is 0.142 nm. To simply calculation, supposed $\angle CAD = \angle BAD = \angle CAD = 109.47^\circ$, and then the last quantity h is estimated to be 0.056 nm. Hence, the height (H) of the spacer or pillaring should be about 0.332 nm.

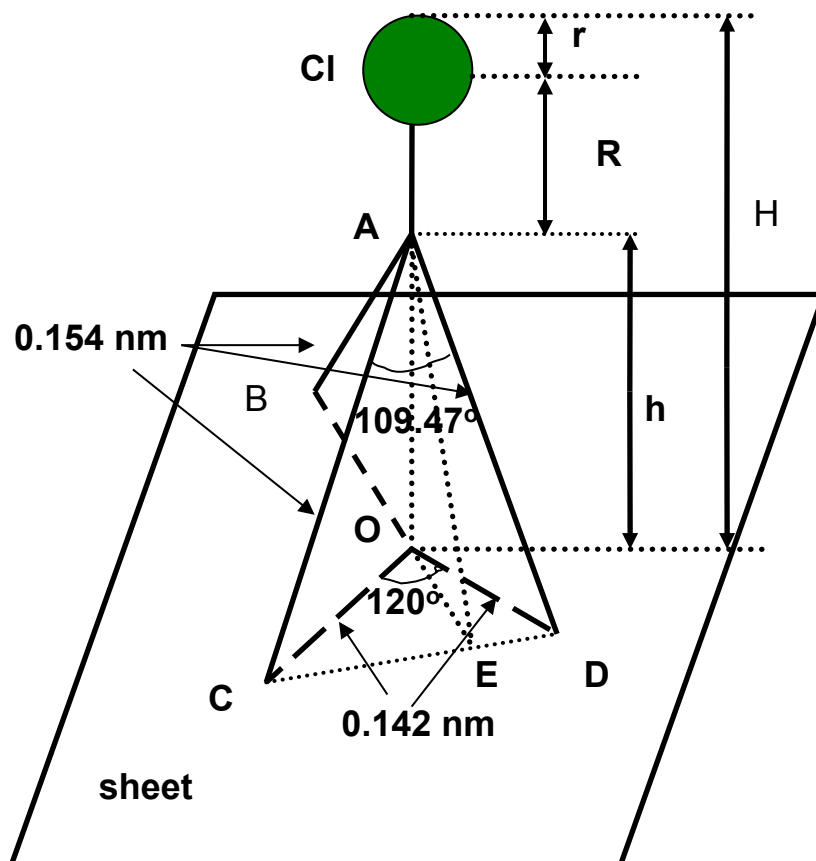


Fig. S1 The height (H) of the spacer or pillaring agent