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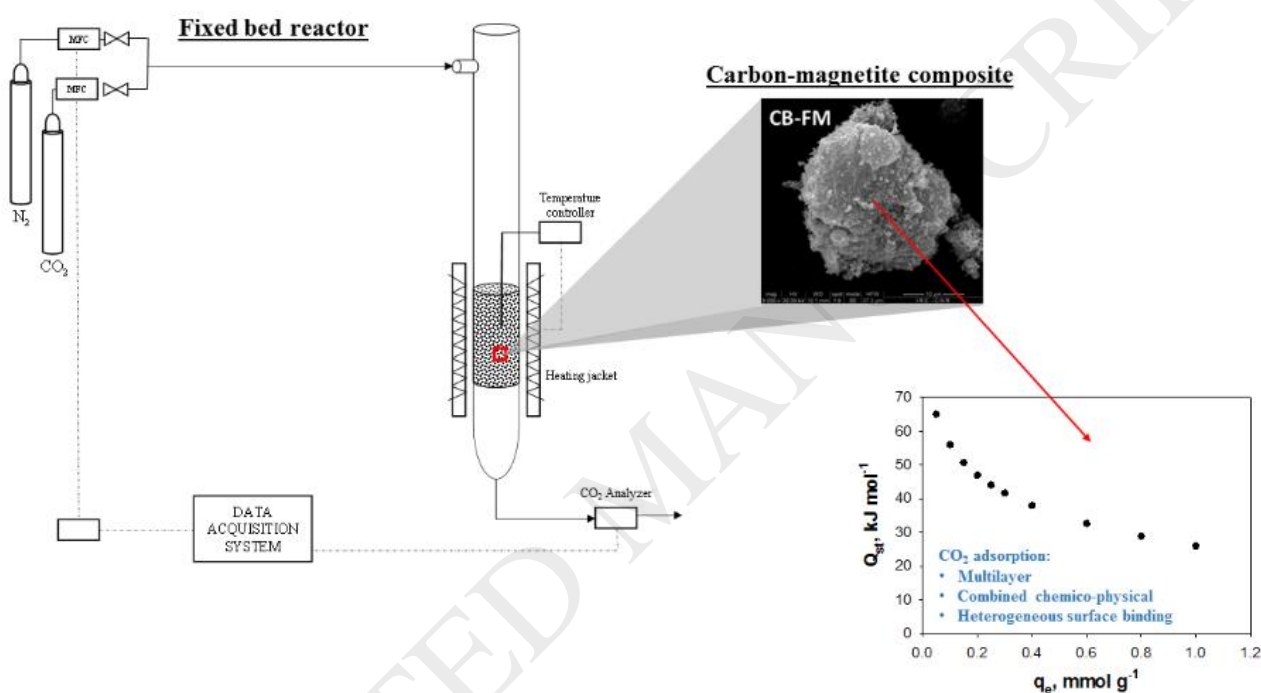
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# Isotherms and thermodynamics of CO<sub>2</sub> adsorption on a novel carbon-magnetite composite sorbent

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## Graphical Abstract



## Highlights

1. CO<sub>2</sub> adsorption on a carbon-magnetite composite (CB-FM) was studied
2. Different equations were used to model the CO<sub>2</sub> adsorption isotherms
3. Adsorption temperature and pressure oppositely affect the thermodynamic of the process
4. CO<sub>2</sub> adsorption on CB-FM is spontaneous and exothermic
5. CO<sub>2</sub> adsorption on CB-FM is a combination of physical and chemical mechanisms

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