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Improving the humidity sensing below 30% RH of TiO₂ with GO modification

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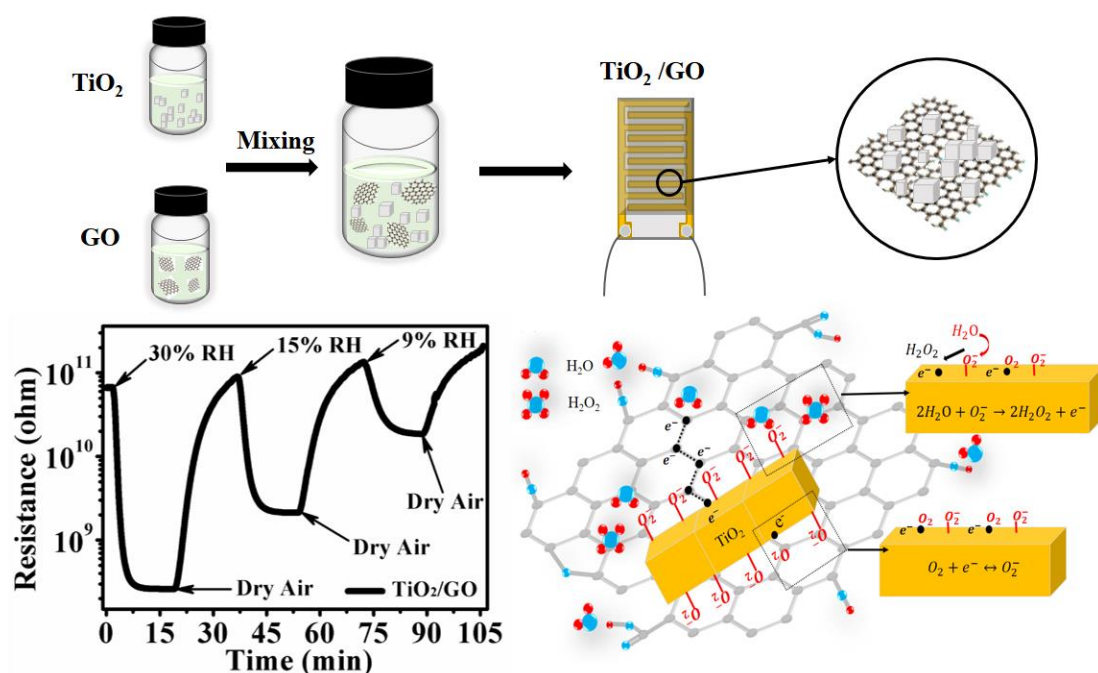
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Research highlights:

1. Rutile phase TiO₂ aggregates having submicron particles were prepared via thermal oxidation of pure Ti-discs, which is extremely simple and inexpensive method.
2. TiO₂ aggregates with submicron particles based sensor exhibited ultra-high response ($R_0/R_{H_2O} > 10^6$) to 90% RH.
3. Sensors based on TiO₂ modified with GO exhibited improved sensitivity, stability and reproducibility.

Graphical Abstract:



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