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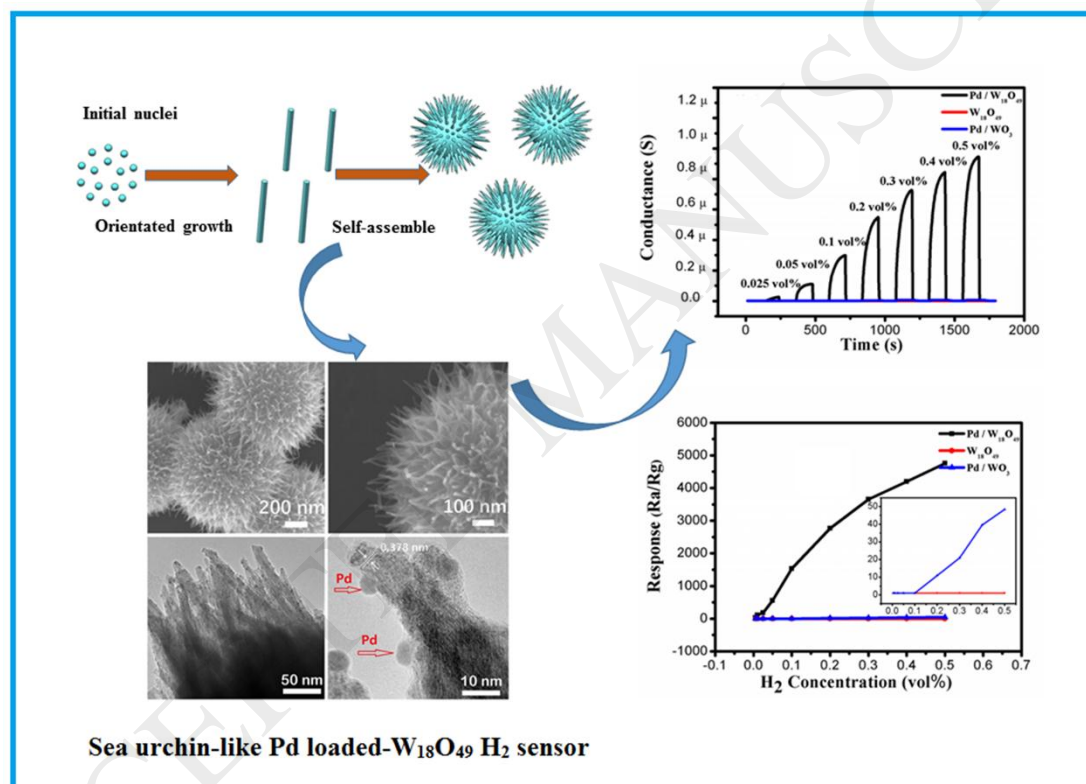
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# Enhanced H<sub>2</sub> gas sensing properties by Pd-loaded urchin-like W<sub>18</sub>O<sub>49</sub> hierarchical nanostructures

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## Graphical abstract



Sea urchin-like Pd loaded-W<sub>18</sub>O<sub>49</sub> nanostructures were synthesized by two-step approach including a hydrothermal reaction and a subsequent incipient wetness impregnation process. Compared with Pd-WO<sub>3</sub> and pure W<sub>18</sub>O<sub>49</sub> sensors, Pd-W<sub>18</sub>O<sub>49</sub> sensor shows a remarkable response to H<sub>2</sub> at low working temperatures.

## Highlights

- Sea urchin-like W<sub>18</sub>O<sub>49</sub> nanospheres are synthesized by a facile one-step hydrothermal route.

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