

Supporting Information

Synthesis of NiGa₂O₄ ultra-thin nanosheets for improved xylene sensing properties and selectivity

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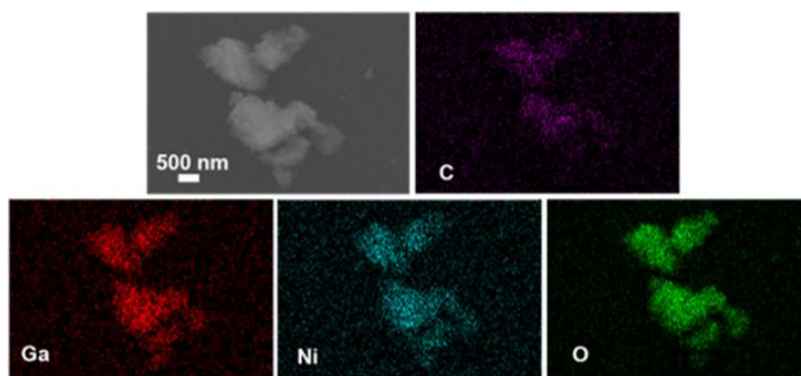


Fig. S1 Elemental mapping images of NiGa LDH.

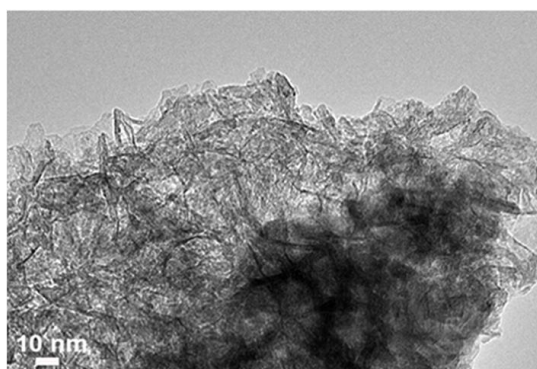


Fig. S2 The TEM image of NiGa LDH.

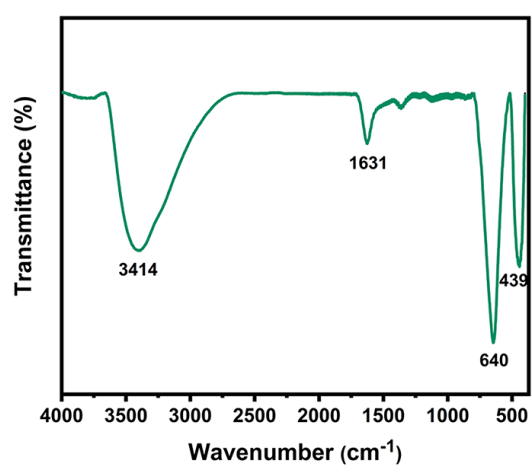


Fig. S3 The FTIR spectrum of NiGa₂O₄.

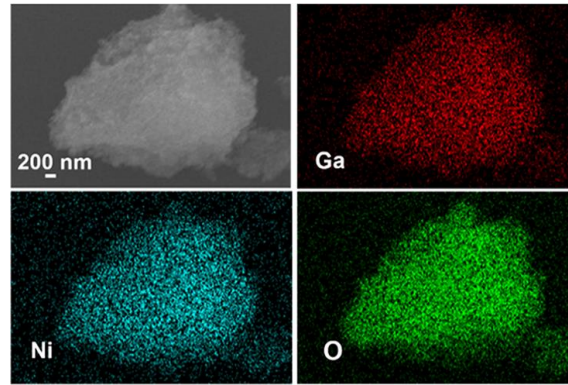


Fig. S4 SEM elemental mapping images of NiGa₂O₄.

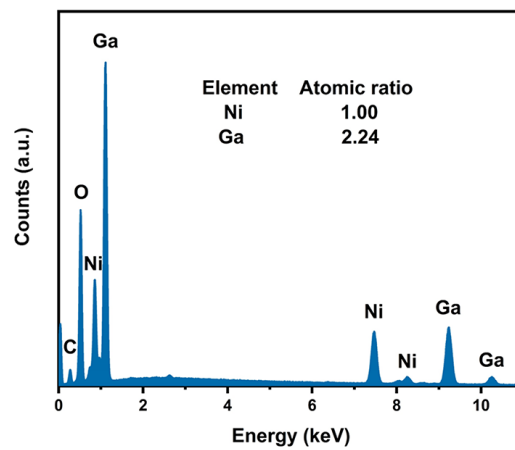


Fig. S5 The EDS spectrum of NiGa₂O₄.

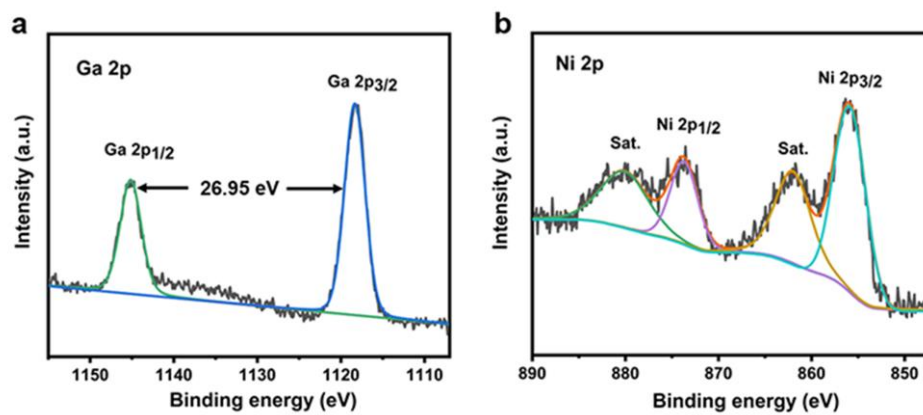


Fig. S6 XPS spectra of (a) Ga 2p and (b) Ni 2p for NiGa₂O₄.

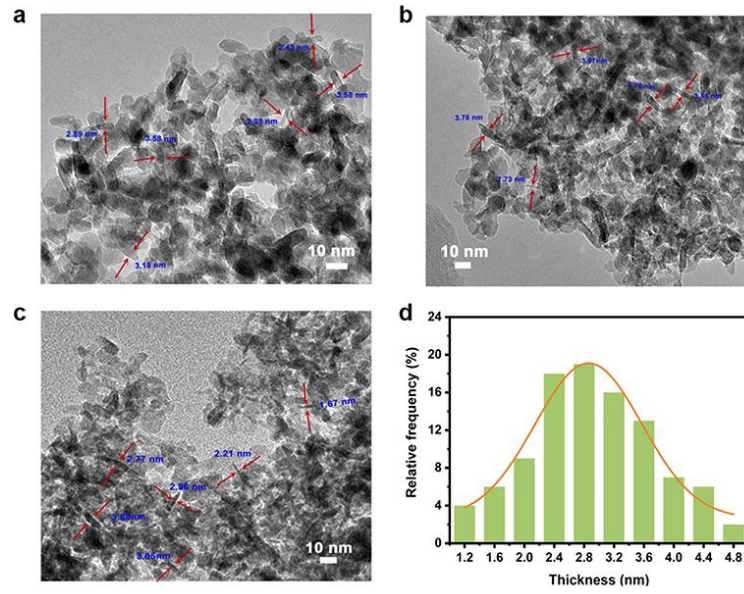


Fig. S7 (a-c) The TEM images and (d) the distribution of nanosheets thickness of NiGa₂O₄.

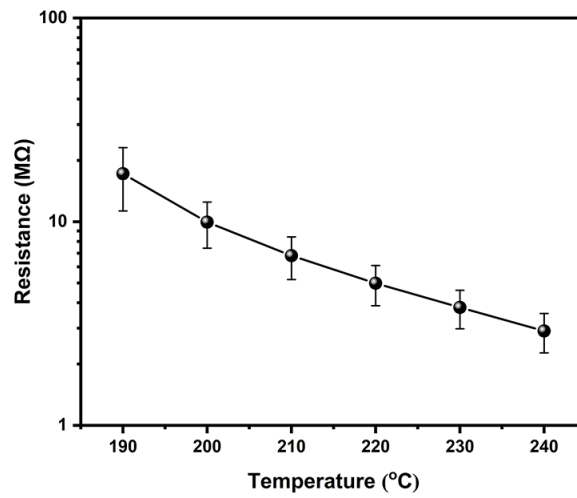


Fig. S8 The initial resistance in air for the sensor based on NiGa₂O₄ nanosheets at different operating temperatures.

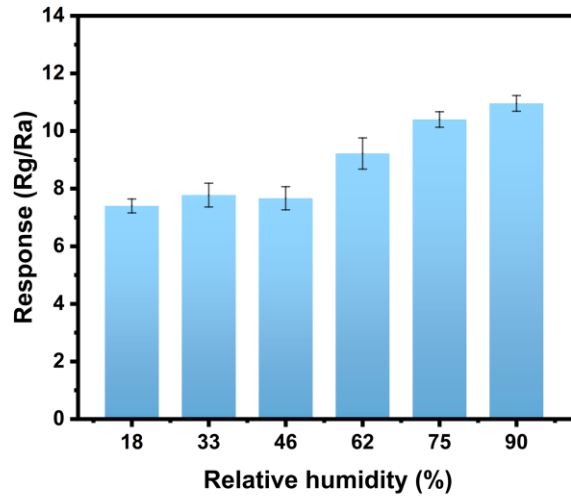


Fig. S9 The responses of sensor based on NiGa₂O₄ nanosheets to 10 ppm xylene at different humidity (190°C).

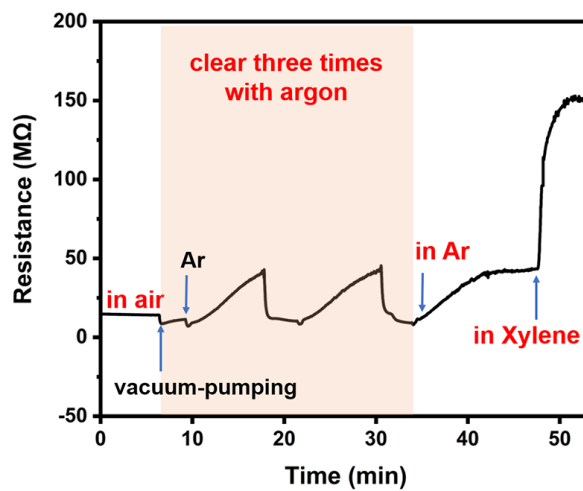


Fig. S10 The resistance changes of sensor based on NiGa₂O₄ nanosheets during vacuum extraction and gas-sensing properties with Ar as background gas (a well-designed device).