



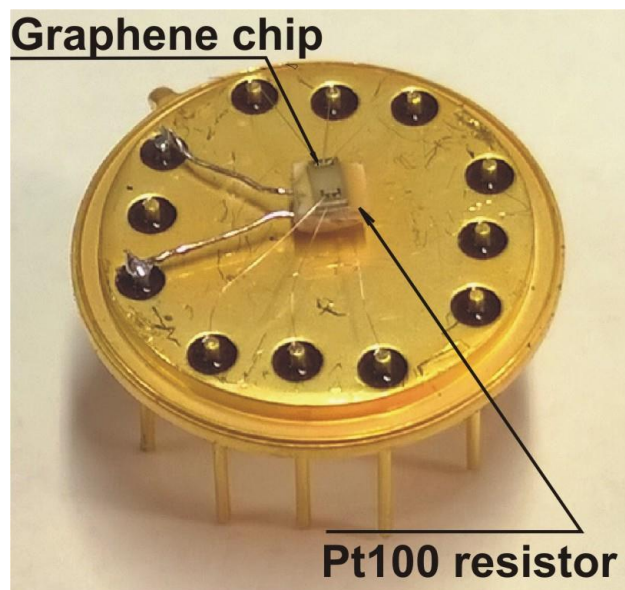
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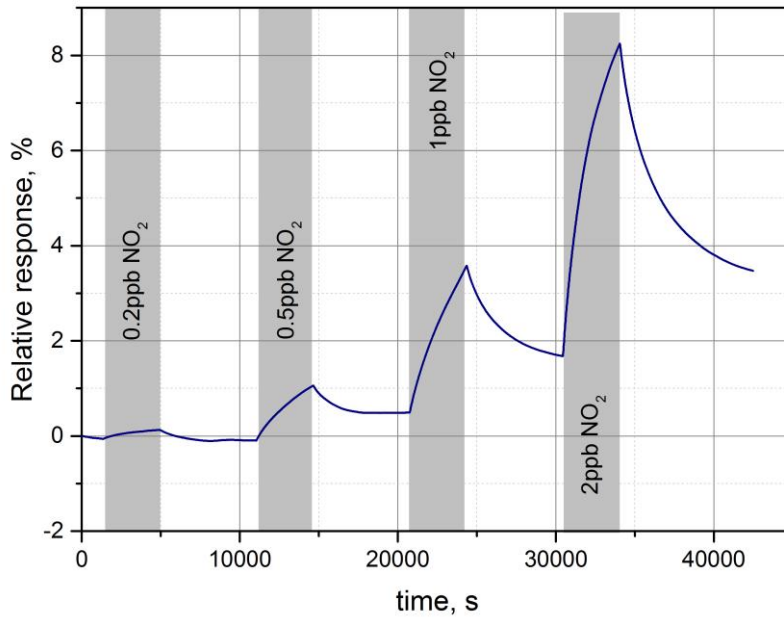
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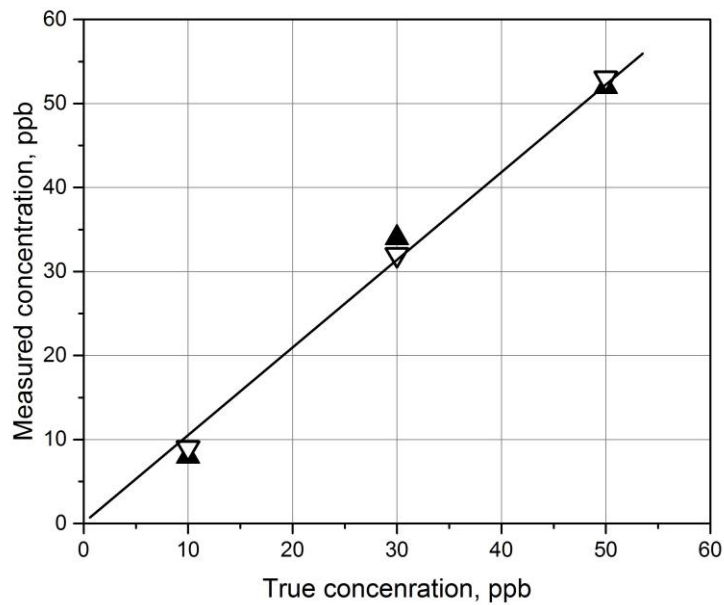
Graphene Based NO₂ Sensor Specification

Material	Single layer graphene on SiC
Chip size	1,5x2mm
Response type	Resistivity change
Nominal resistivity	10-20Kohm
Operation temperature	20-150°C
Integrated heater	Yes, Pt100 resistor
Encapsulation	no
Packaging	TO-8
Target gases	Nitrogen dioxide, ozone
Concentration range Nitrogen dioxide	0.1-200ppb
Concentration range ozone	0.2-400ppb
Selectivity to water vapore	>10000
Selectivity to ammonia	>1000





Response on exposure to the gas mixture containing NO₂ in concentrations: 0.2 ppb, 0.5 ppb, 1 ppb and 2 ppb at 110°C. Exposure periods are shown as grey band.



NO₂ concentration measured by graphene sensor versus true concentration measured by Apna 360 Horiba Scientific chemiluminescence analyzer. Black triangle correspond to the result of the first measurement cycle, white triangles to the second measurement cycle, and the solid line is linear approximation.