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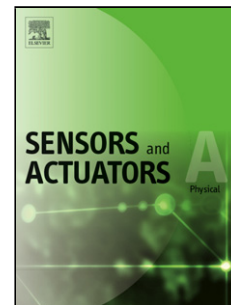
Title: A surface micromachined pressure sensor based on polysilicon nanofilm piezoresistors

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Highlights

A surface micromachined pressure sensor based on polysilicon nanofilm piezoresistors is presented.

For the polysilicon diaphragm pressure sensor, in order to increase sensitivity and full scale pressure, the pressure applied on the diaphragm that leads to the ratio of deflection at center of the diaphragm to the diaphragm thickness being 0.25 is determined as full scale pressure.

In the process of the sensor fabrication, the methods are carried out for residual stress relaxation in the polysilicon diaphragm and prevention of adhesion in the sensor cavity.

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