Gas sensing materials based on TiO2 thin films

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Auteur	Iftimie, Nicoleta [1], Luca, Dumitru [2], Lacomi, Felicia [3], Girtan, Mihaela [4], Mardare, Diana [5]
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Résumé en anglais	Ti O 2 thin films were prepared by spray pyrolysis using a solution of titanium tetrachloride and ethyl alcohol. The deposition was performed onto different substrates (silicon, quartz, glass) maintained at the same temperature, 270 ° C . After annealing, a predominant rutile structure is obtained for films deposited onto silicon and quartz substrates, as revealed by x-ray diffraction patterns. The Ti O 2 films were exposed to different gases, at different temperatures, in order to evaluate their gas sensitivity. The optimum operating temperatures, showing the highest gas sensitivity, were determined for some gases (acetone, ethanol, methane, and liquefied petroleum gas).
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