

ABSTRACT

The present disclosure provides for a transistor for detecting gases in the ambient air comprising a plurality of electrodes with one electrode being a gate electrode; further at least one electrode being individually coated by a ceramic, wherein an ionogel is connecting all electrodes with each other, the ionogel being an ionic liquid immobilized by a matrix. It also provides for use of a transistor as defined above as an air-quality sensor. It also provides for a process for making a transistor, the process comprising: providing a plurality of electrodes, wherein one of the electrodes is a gate electrode (110); individually depositing a ceramic precursor on at least one of the plurality of electrodes (130); and connecting the plurality of electrodes with an ionogel, the ionogel being an ionic liquid immobilized by a matrix (140). It also provides a transistor produced by the process (100) as defined above.

[FIG. 1 to be published together with the abstract]