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Title: Macro Modeling of Ion Sensitive Field Effect Transistor with Current Drift

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- Silicon nanowire field-effect transistor sensors (SiNW sensors) were co-integrated with CMOS read-out circuits by using top-down approach and CMOS-compatible back-end process.
- The drift of drain current in SiNW sensors was analyzed under various conditions of pHs and liquid gate voltages.
- The electrical model which can reflect the drift effect and can be expressed only by the combination of electrical circuit components was proposed.

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