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Ferroelectric Switching in a Polymeric Transistor PETER JACOBSON, JIE XIAO, LUIS ROSA, PETER DOWBEN — We have exploited the band offset of n-type poly(vinylidene fluoride – trifluoroethylene) copolymer films to make heterojunction diodes and field effect transistors with polyaniline and polypyrrole. The band offsets have been characterized by photoemission and inverse photoemission. The transistor behavior is strongly influenced by the ferroelectric poly(vinylidene fluoride – trifluoroethylene). The applied gate voltage can be used to switch the ferroelectric layer, modulating the source to drain current. Nonvolatile polymeric memory elements may be possible.

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