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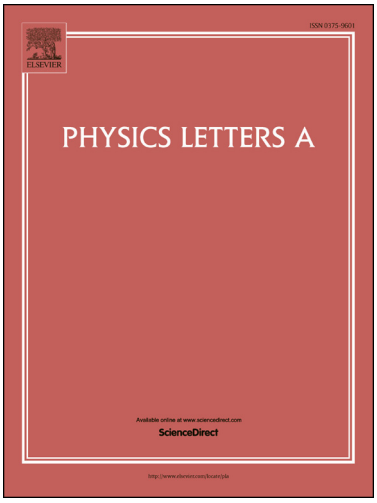

Impacts of thermal annealing temperature on memory properties of charge trapping memory with NiO nano-pillars

Xiaobing Yan, Tao Yang, Xinlei Jia, Jianhui Zhao, Zhenyu Zhou

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Highlights

- The impacts of the annealing temperature on the charge trapping memory performance in $Au/SiO_2/NiO/SiO_2/Si$ structure were investigated in detail.
- The high resolved transmission electron microscopy show that the NiO films grew as nano-pillars structure.
- It is proposed that the excellent memory characteristics of the device are attributed to oxygen vacancies accumulated by the grain boundaries around NiO nano-pillars.