

Accepted Manuscript

Developing an in situ environmental TEM set up for investigations of resistive switching mechanisms in Pt-Pr_{1-x}Ca_xMnO_{3-δ}-Pt sandwich structures

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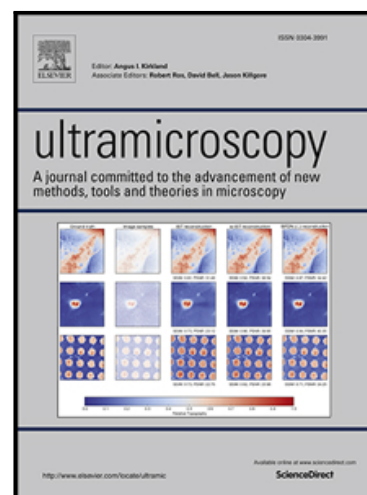
PII: S0304-3991(16)30267-4
DOI: [10.1016/j.ultramic.2017.08.012](https://doi.org/10.1016/j.ultramic.2017.08.012)
Reference: ULTRAM 12443

To appear in: *Ultramicroscopy*

Received date: 20 October 2016
Accepted date: 20 August 2017

Please cite this article as: Thilo Kramer , Daniel Mierwaldt , Malte Scherff , Mike Kanbach , Christian Jooss , Developing an in situ environmental TEM set up for investigations of resistive switching mechanisms in Pt-Pr_{1-x}Ca_xMnO_{3-δ}-Pt sandwich structures, *Ultramicroscopy* (2017), doi: [10.1016/j.ultramic.2017.08.012](https://doi.org/10.1016/j.ultramic.2017.08.012)

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Highlights

- An in situ TEM geometry with two fixed contacts for electric biasing is developed.
- Oxygen environment, electron beam and electric stimulation influence redox behavior.
- An oxygen vacancy migration-related switching mechanism is demonstrated.
- Switching is modified by the specific conditions of in situ TEM experiments.

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