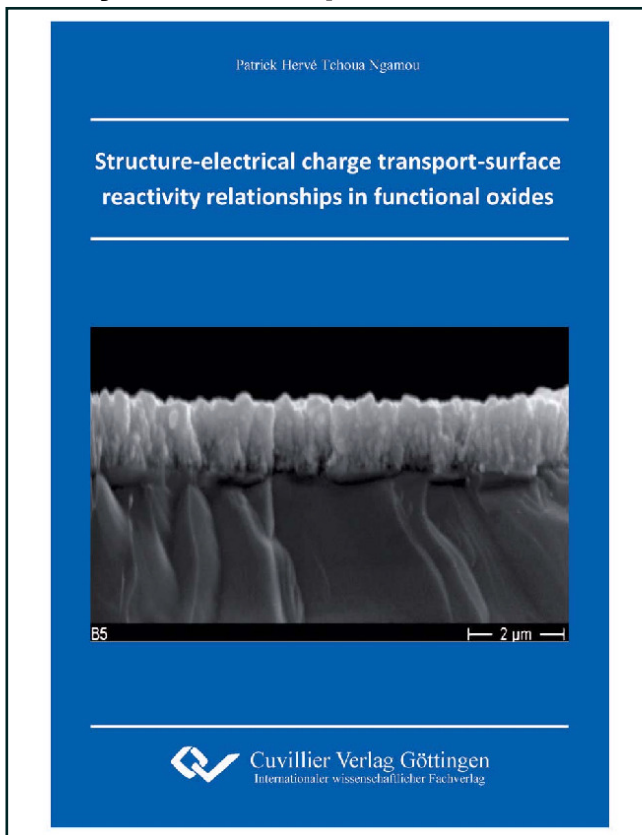




Patrick Hervé Tchoua Ngamou (Autor)
**Structure-electrical charge transport-surface
reactivity relationships in functional oxides**



<https://cuvillier.de/de/shop/publications/637>

Copyright:
Cuvillier Verlag, Inhaberin Annette Jentsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen,
Germany
Telefon: +49 (0)551 54724-0, E-Mail: info@cuvillier.de, Website: <https://cuvillier.de>

Contents

1	INTRODUCTION.....	1
2	EXPERIMENTAL METHOD AND TECHNIQUES.....	5
2.1	CHEMICAL VAPOR DEPOSITION OF OXIDE FILMS.....	5
2.2	THIN FILM CHARACTERIZATION	8
2.3	PHYSICO-CHEMICAL PROPERTIES	11
2.4	CATALYTIC ACTIVITY	17
3	CVD GROWTH AND TRANSPORT PROPERTIES OF $LABO_3$ (B = MN, CO, FE AND CR) FILMS	21
3.1	THIN FILMS GROWTH AND STRUCTURAL CHARACTERIZATION.....	22
3.2	ELECTRICAL CHARGE TRANSPORT.....	28
3.3	CONCLUSION	33
4	UNUSUAL TWO-DIMENSIONAL ELECTRICAL CHARGE TRANSPORT AT THE SURFACE OF POLYCRYSTALLINE PEROVSKITE ULTRATHIN FILMS	37
4.1	STRUCTURAL CHARACTERIZATION.....	38
4.2	ELECTRICAL CHARGE TRANSPORT.....	40
4.3	CONCLUSION	47
5	INFLUENCE OF THE OCTAHEDRA CONNECTION ON THE ELECTRICAL CHARGE TRANSPORT AND SURFACE REACTIVITY	50
5.1	STRUCTURAL CHARACTERIZATION.....	51
5.2	ELECTRICAL CHARGE TRANSPORT.....	54
5.3	REDUCIBILITY OF $LaCOO_3$ AND Co_3O_4 FILMS	58
5.4	SURFACE REACTIVITY	61
5.5	CONCLUSION	66
6	TAILORING THE PROPERTIES AND THE REACTIVITY OF THE SPINEL COBALT OXIDE	70
6.1	STRUCTURAL CHARACTERIZATION.....	72
6.2	ELECTRICAL CHARGE TRANSPORT.....	78
6.3	THERMAL PROPERTIES	81
6.4	CATALYTIC ACTIVITY	85
6.5	CONCLUSION	89
7	SUMMARY	94