Supplementary information

for

Flexible films as anode materials based on rGO and TiO_2/MnO_2 in Li-ion batteries free of non-active agents

by

Tomasz Kędzierski[1], Daria Baranowska[1], Damian Bęben[2,3], Beata Zielińska[1], Xuecheng Chen[1], Ewa Mijowska[1]

[1]*Department of Nanomaterials Physicochemistry, Faculty of Chemical Technology and Engineering, West Pomeranian University of Technology in Szczecin, Piastów 45, 70-311 Szczecin, Poland*

[2]*Nanores Sp. z o.o. Sp.k., Bierutowska 57-59, 51-317 Wrocław, Poland.*

[3]*Institute of Low Temperature and Structure Research, Polish Academy of Sciences in Wrocław, Okólna 2, 50-420 Wrocław, Poland.*

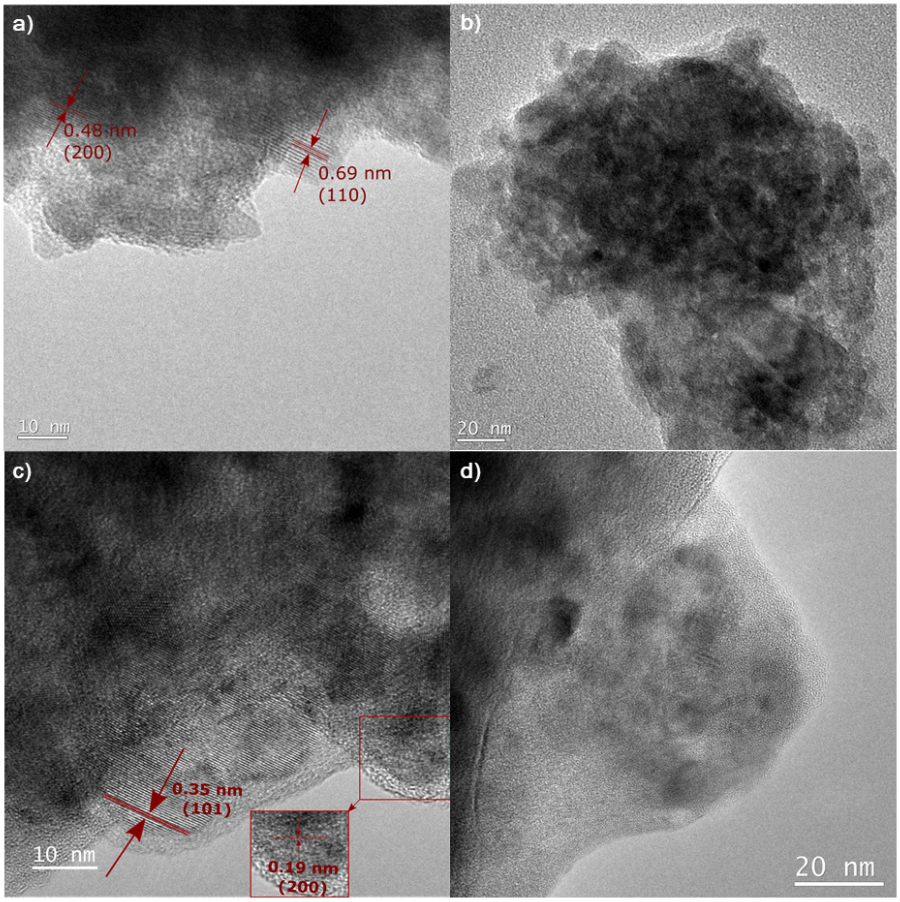

Figure S1. TEM images of (**a**,**b**) MnO_2 and (**c**,**d**) TiO_2.

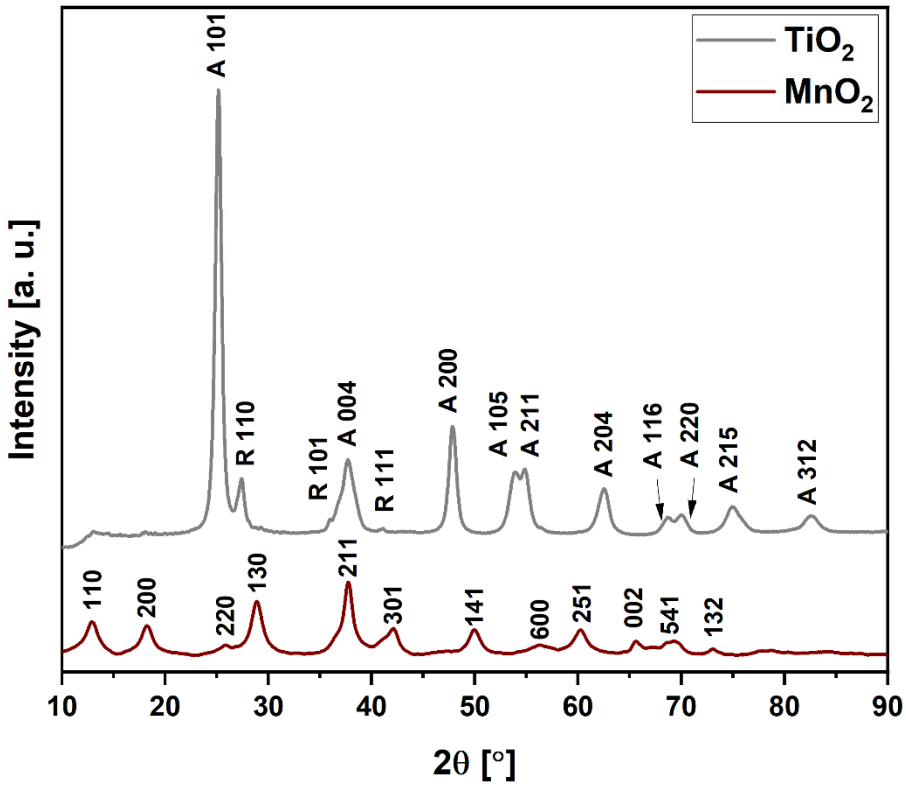

Figure S2. XRD diffractograms of TiO_2 and MnO_2. A – anatase phase, R – rutile phase.

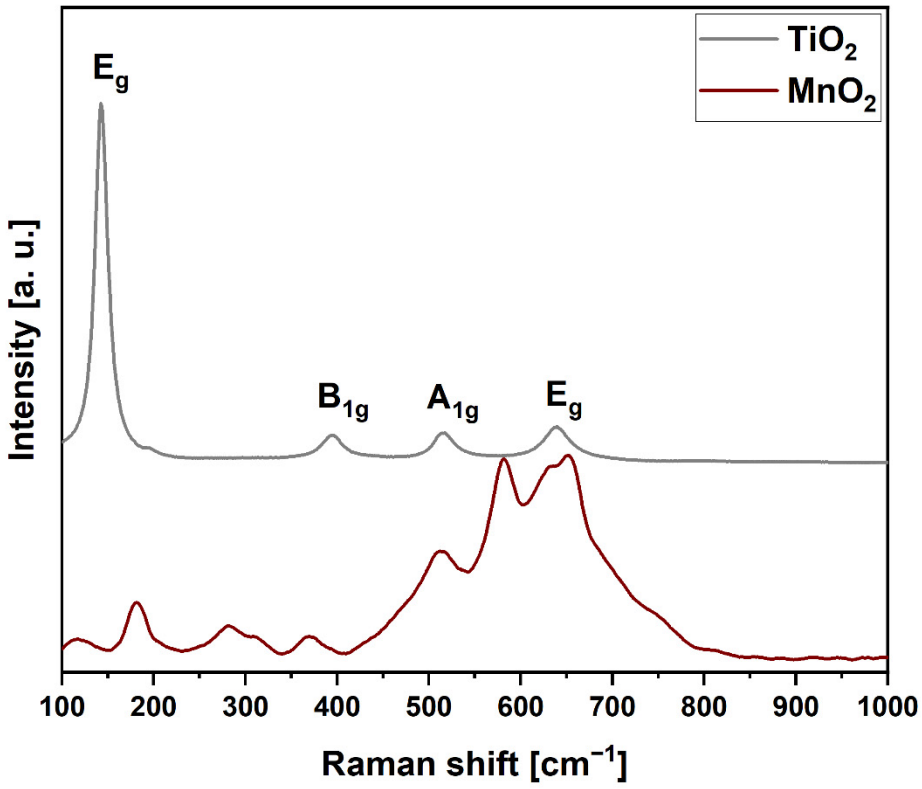

Figure S3. Raman spectra of TiO_2 and MnO_2.

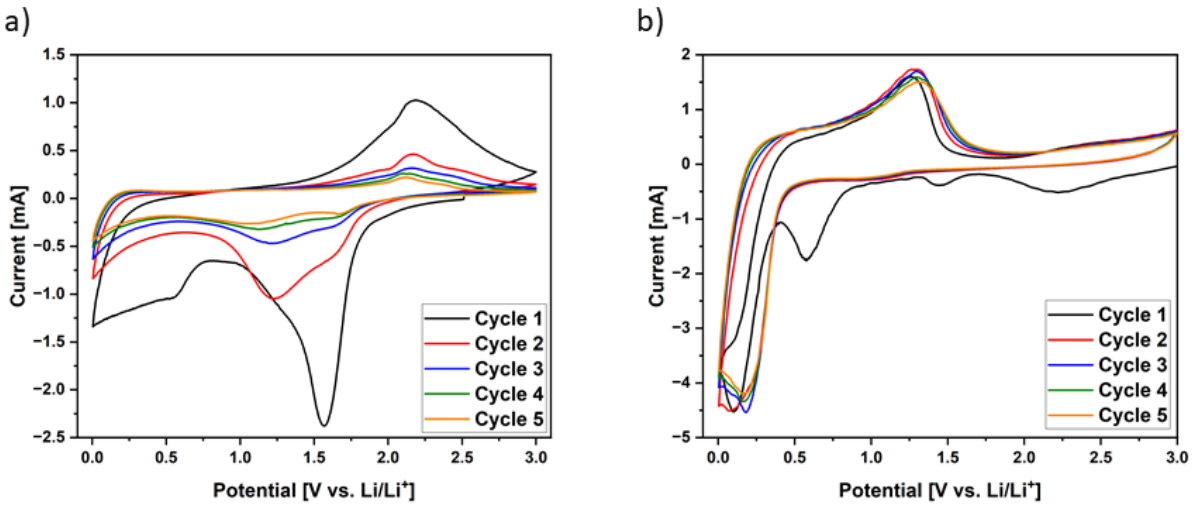

Figure S4. Cyclic voltammetry of pristine (**a**) TiO_2 and (**b**) MnO_2.

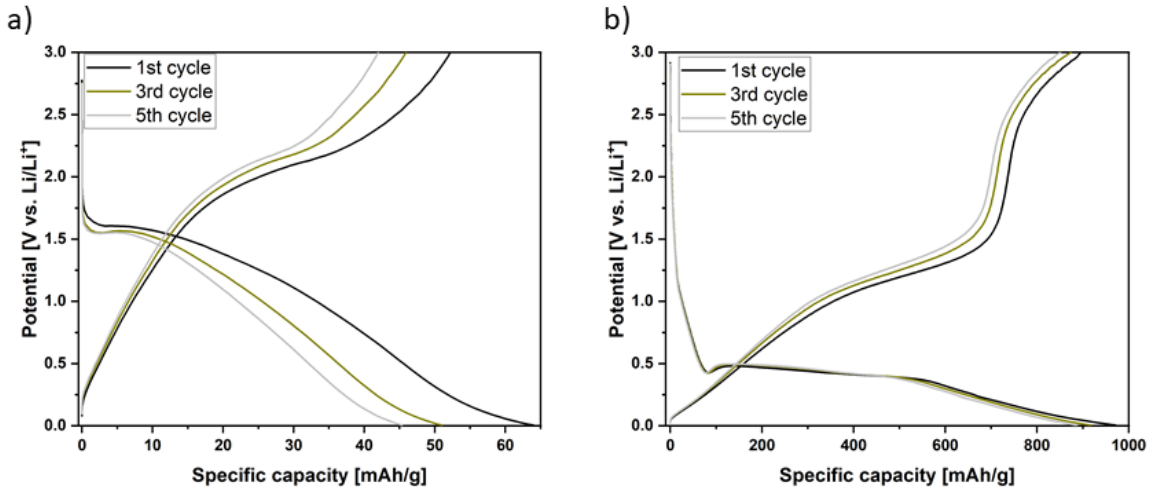

Figure S5. Discharge-charge profiles of (**a**) TiO_2 and (**b**) MnO_2 at a current density of 50 mA/g.

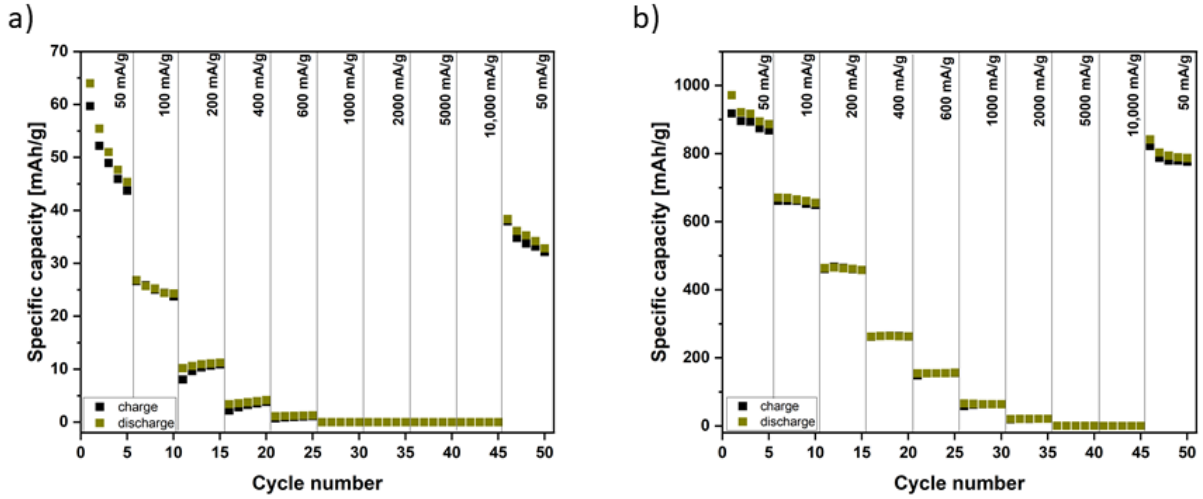

Figure S6. Rate performance of (**a**) TiO_2 and (**b**) MnO_2 at different current densities.

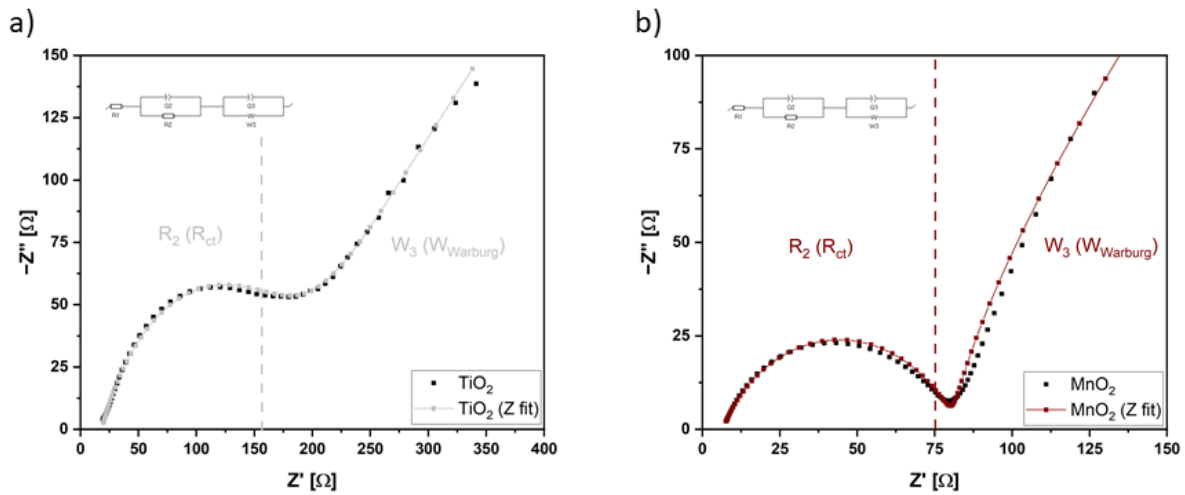

Figure S7. Nyquist plots of (**a**) TiO_2 and (**b**) MnO_2 after discharge/charge cycles and the equivalent circuit diagram of the cells.

Table S1. Fitted results of equivalent circuit in Figure S7.

Sample	R_s [Ω]	R_{ct} [Ω]
TiO_2	17.91	156.9
MnO_2	6.49	75.23