

# Electrophoretic Deposition and Characterization of Thin-film Membranes $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$

Efim Lyalin <sup>1</sup>, Evgeniya Il'ina <sup>1</sup>, Elena Kalinina <sup>2,3,\*</sup>, Boris Antonov <sup>1</sup>, Alexander Pankratov <sup>1</sup> and Danil Pereverzev <sup>4</sup>

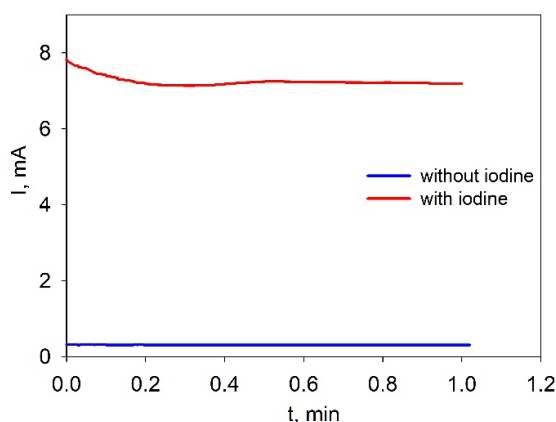
<sup>1</sup> Laboratory of Electrochemical Power Sources, Institute of High Temperature Electrochemistry, Ural Branch of the Russian Academy of Sciences, 620990 Yekaterinburg, Russia; efim.lyalin.2013@inbox.ru (E.L.); ilyina@ihite.uran.ru (E.I.); antonovbd@ihite.uran.ru (B.A.); a.pankratov@ihite.uran.ru (A.P.)

<sup>2</sup> Laboratory of Complex Electrophysic Investigations, Institute of Electrophysics, Ural Branch of the Russian Academy of Sciences, 620016 Yekaterinburg, Russia

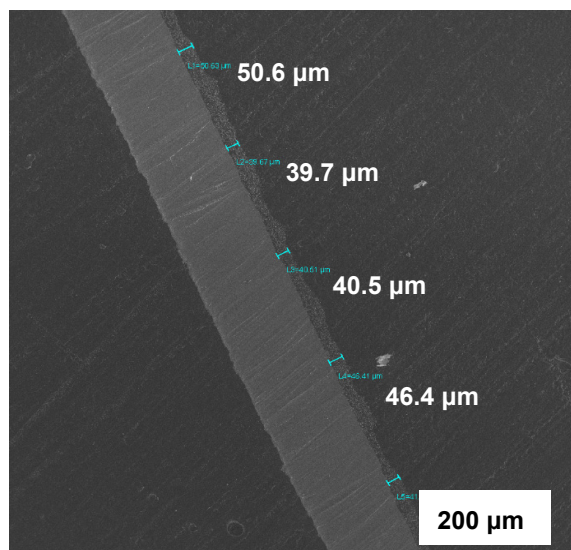
<sup>3</sup> Department of Physical and Inorganic Chemistry, Institute of Natural Sciences and Mathematics, Ural Federal University, 620002 Yekaterinburg, Russia

<sup>4</sup> Laboratory of Solid State Ionics, Institute of Solid State Chemistry, Ural Branch of the Russian Academy of Sciences, 620108 Yekaterinburg, Russia; danil\_per@mail.ru

\* Correspondence: jelen456@yandex.ru; Tel.: +7-343-267-87-82



**Figure S1.** The time dependences of current during EPD in  $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$  suspension without and with iodine addition (at a constant voltage on the electrodes of 80 V).



**Figure S2.** SEM image of the cross-section of LLZ film annealed at 500 °C in Ar atmosphere.