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(54) Title: PROCESSES FOR FORMING METAL OXIDE THIN FILMS ON ELECTRODE INTERPHASE CONTROL

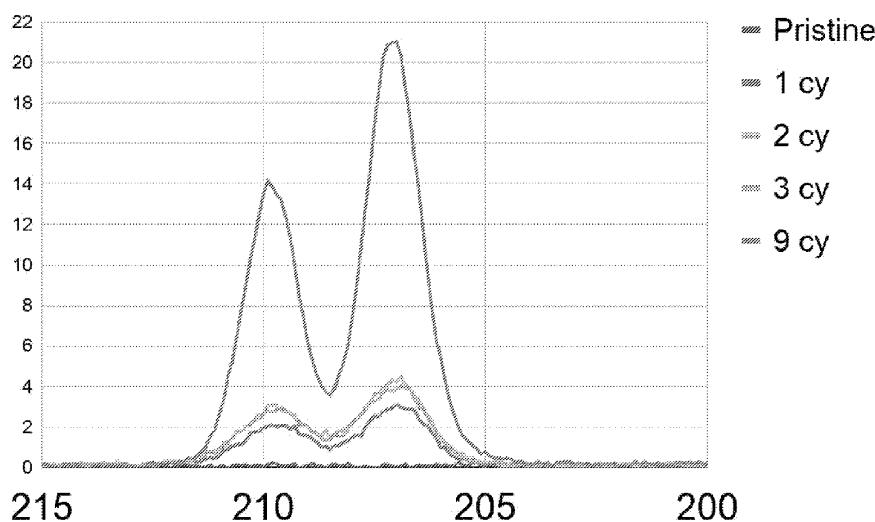


FIG. 1

(57) Abstract: This invention provides a novel solution to form an artificial interphase on the electrode to protect it from fast declining electrochemical behaviors, by depositing Metal Oxides Layer, by ALD or CVD. Metals discussed here are IVA-VIA elements (Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W). The film needs to be thin, possibly discontinuous, and lithium ion conductive enough, so that the addition of this thin film interface allows fast lithium ion transfer at the interface between electrode and electrolyte.

[Continued on next page]

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