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## **Constraints on stochastic plastic activity as a source for BD nucleation**

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It has been suggested that BD can nucleate due to stochastic plastic activity induced in the cathode under extreme fields. The nature and type of plastic activity can be constrained from experimental observations on post-BD electrodes. I will present estimates to such constraints from transmission electron microscopy of samples exposed to high fields, discussing properties like dislocations densities, denuded zones, lateral and depth correlation lengths. These together with understanding gained from effective mean field model, are used to propose basis for advanced models and future experimental setups.

Such advanced models have the potential of explaining the role of electrode structure as well as operation procedure during conditioning.

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