

Natron Energy – Senior Scientist Challenge Question
March 9, 2020

Propose a design of experiments for the development of a non-aqueous electrolyte suitable for a high-power cell containing a $\text{NaTi}_2(\text{PO}_4)_3$ anode that requires a SEI. The electrolyte should contain one or more additives that will enable controlled SEI growth on this anode during a formation cycle. Your proposal should include:

- Your name and contact information.
- Two or more candidate solvents, and two or more candidate salts.
- An initial list of additives to be screened.
- Plans for what experiments should be performed, and why.
- Brief explanations for your selected solvents, salts, and additives based on their physical and chemical properties. Strong responses will include a justification based on academic/patent literature.
- Brief explanation of the most likely reason that your proposed experiments will fail.

Please submit your proposal in .pdf or .docx format along with your resume to jobs@natron.energy.