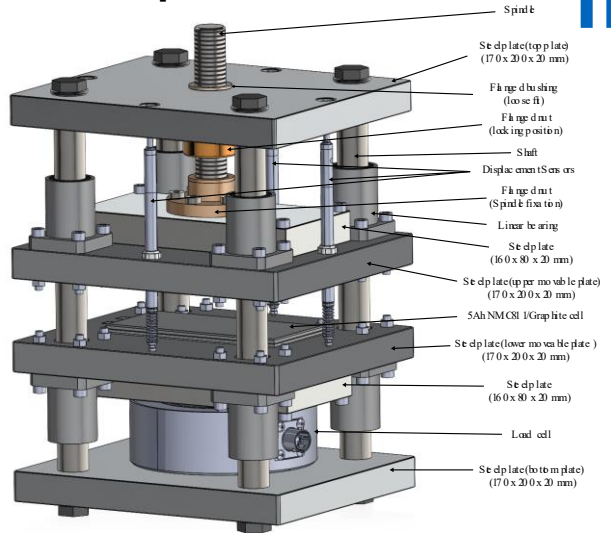
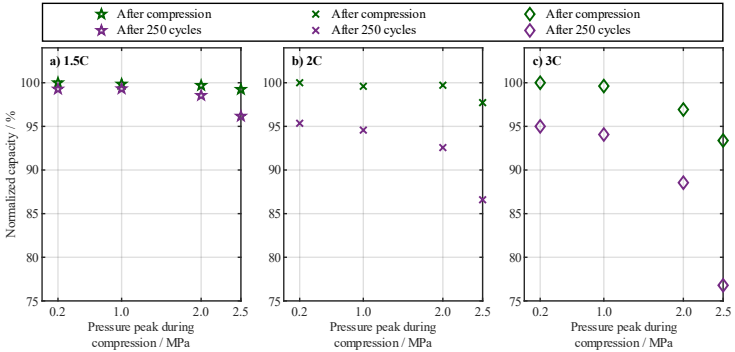
Influence of pressure peaks occurring during battery module production on performance

- Pressure peaks cause irreversible compression, resulting in reduced porosity.
- Higher pressure peaks result in less pressure relaxation after cells are constrained to a fixed dimension.
- Increased pressure peaks degrade rate capability at high C-rates (> 1C) immediately after compression, while no significant effect is observed at lower C-rates.
- Rate capability retention is further reduced due to higher pressure peaks, as the resulting lower porosity amplifies the impact of performance-degrading aging effects, e.g., reduced conducting salt concentration, particularly at high C-rates (> 1C).





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