



Contribution ID: 137

Type: **Early Career (Eligible for Oral or Poster)**

Surface Engineering Research for High Q and High Gradient CW Accelerators

Tuesday, 16 May 2023 11:15 (15 minutes)

This talk will discuss Fermilab's recent progress in the surface engineering of superconducting radio-frequency (SRF) cavities geared toward producing simultaneously high quality factors and high accelerating gradients in cryomodules. We investigate possible microscopic mechanisms that drive improved performance by carrying out sequential RF tests on cavities subjected to a variety of surface engineering treatments. We compare performance evolution to observations made with material science techniques and find correlations with material parameters.

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Session Classification: Accelerator: Superconducting RF

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