

MM 2: Invited Talk: Lilleodden

Time: Monday 9:30–10:00

Location: SCH A 251

Invited Talk MM 2.1 Mon 9:30 SCH A 251
Function follows form: on tailoring functional materials via microstructural design — ●ERICA LILLEODDEN — Fraunhofer-IMWS

While the Bauhaus adage say that form follows function, materials scientists understand that function follows form; we aim to exploit structuring of materials to achieve targeted function; the inherent interplay between processing, structure and properties is indeed the cornerstone

of materials science. In this talk, I will present two examples in which various structural elements can be used to tune the functional response of materials in ways that may be unexpected: exploiting structural geometry to tailor strength to stiffness ratios; and how alloying and thermal treatments can lead to a simultaneous increase in both strength and hardening. These examples will be placed in the context of how we view classical laws governing structure-property relations, with an outlook on new approaches to materials design going forward.