



IFPRI BRIEF TEMPLATE

Check One: Project Review Collaboration
 Workshop Other

Descriptive Title	Tools, techniques, and applications of correlative microscopy for characterizing the chemical composition and microstructure of particle-filled soft materials
Working Title¹	Correlative microscopy for filled / multi-components complex systems
Technical Area²	Wet system
Date	16 6 2025
Short Description	The performance of filled systems—such as elastomers, tires, multi-component food products (instant milk, coffee...), and other composites—relies heavily on their microstructure, composition, and interfacial behavior. However, gaining detailed insights into these complex systems remains a challenge, particularly for materials with low glass transition temperatures (T _g), which complicate structural characterization
Objectives	Explore both emerging and commercially available technologies that integrate multiple analytical techniques within correlative microscopy to characterize complex systems—particularly soft materials. Emphasize the additional insights these advanced instruments provide beyond conventional optical microscopy. The review should also highlight leading universities and research laboratories with recognized expertise in this field.
Scope	See objectives section

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¹ Title used in meeting agendas and file archives

² One or more from the following list: W = wet systems; D = dry systems; F = particle formation; SR = size reduction; M = modeling; SE = systems engineering