



IFPRI BRIEF TEMPLATE

Check One: **Project** **Review** **Collaboration**
 Workshop **Other**

Descriptive Title	How redispersion makes our lives hard and why we can't correctly characterize this
Working Title¹	From dry (powder) to wet (slurry/solution)
Technical Area²	Wet systems, Dry systems, Characterization
Date	14 June 2022
Short Description	<p>In industry there is often a disconnect between powder/filler suppliers and users. There can be changes in the powder characteristics that negatively impact how powders incorporate into various fluids and this step can influence the final product performance.</p> <p>This proposal is to gather a diversity of expertise (outside of the box) to discuss aspects that should be considered when wetting/incorporating powders. The objective is to help define:</p> <ol style="list-style-type: none"> 1. Physical properties of powders that drive the ability and ease of wetting/incorporation 2. Recommended characterization tools to troubleshoot poor incorporation 3. Considerations for dry powder producers to help communicate how their powder should be handled and/or characterized in slurries and suspensions. <p>Potentially the workshop can be used for these additional purposes:</p> <ol style="list-style-type: none"> 1. Consider sustainability in powder/slurry supply chains → will the powder be dispersed? How should that impact the powder processes (e.g. drying)? 2. Create a roadmap for the interface between wet and dry systems and how IFPRI should address this moving forward
Objectives	<p>What are the fundamental physical parameters and characterization methods?</p> <p>Which are the single particle property methods that are important?</p> <p>How do you choose the characterization method?</p> <p>Influence of drying and re-wetting on product sustainability</p>

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

	Three phase systems and the influence of air Identify instrumentation that could be applied from outside the field
Scope	all particle types Porous and non-porous particles Aqueous and inorganic fluids → various fluids!! Bulk system, non single particle wetting Three phase systems and the influence of air Considerations for different types of processing and mixing

Recommended Contractors (2 or 3)		
Name	Institution	Email Address
Nick Spencer	ETH	
Joël De Coninck	U Mons	
Eddie Cole (tuning fork AFM)		
Interpore Conference		
Geophysics community	Ask Michel	
John Fitzpatrick	University of Cork	
Heather Emady	ASU	
Michael Kappl	MP Mainz	
Stephan Herminghaus	MP Goettingen	
David Quere	Paris	
Tanguy Leborgne	University of Rennes	
Yves Meheust	University of Rennes	
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Submitted By:	
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Erin Koos	KU Leuven
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