**Check One:** [ ] **Project** [x] **Review** [ ] **Collaboration**

[ ] **Workshop** [ ] **Other**

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| **Descriptive Title** | Possibilities of Atomic Layer Deposition |
| **Working Title[[1]](#footnote-1)** | Atomic Layer Deposition |
| **Technical Area[[2]](#footnote-2)** | Particle Formation |
| **Date** | June 16th, 2025 |
| **Short Description** | Atomic Layer Deposition (ALD) is developing in a technique that is used to add a functional coating (1 to 100 atomic layers) on particulate materials to achieve a broad variety of functionality. Examples are: improve flowability, controlled release, catalytic activity, visual appearance… It is beneficial for the members of the IFPRI to have a review discussing the possibilities of ALD, and methods and materials applied.Chemicals cost from 1 ct/kg product @100kg/h product coating rate of 5 um particles |
| **Objectives** | The review should give an overview of:* Functionalities generated by ALD. Expected new functionalities may also be included.
* Coating material used for ALD and specifications of the materials to be coated.
* Production methods including limitations.
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| **Scope** | Materials in scope to be coated are: pharmaceuticals food ingredients, function powders, polymer powders. No direct limitations on particle size distribution |

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| **Recommended Contractors (2 or 3)** |
| **Name** | **Institution** | **Email Address** |
| Ruud van Ommen | Delft University of Technology | J.R.vanOmmen@tudelft.nl |
| Al Weimer | University of Colorado, Boulder | alan.weimer@colorado.edu |
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| **Submitted By:** |
| **Name** | **Organization** |
| Pieter Vonk | Envalior |
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1. Title used in meeting agendas and file archives [↑](#footnote-ref-1)
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 [↑](#footnote-ref-2)