



**ADVANCED MATERIALS DEVELOPMENT TARGETED WORKFLOW FROM R&D TO
MANUFACTURING**

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Persistent demand for polymer compounds with novel material properties targeting at new applications deserves a revision of the workflow from research to manufacturing. Effective development requires new approaches in each step along the innovation process. We will demonstrate that for the identification of new recipes, both in terms of components and composition, high throughput compounding has become an effective tool, in particular when being combined with design of experiments. For the subsequent scale up from laboratory through pilot plant and ultimately manufacturing, we developed quantitative scaling methods¹⁾. They have to be combined with advanced understanding of the interaction between recipe, processing, and final properties. Apart from that, for new products with initially small market volumes, invest into a new dedicated manufacturing line is economically not viable. Therefore, the transfer to existing compounding production units has to cope with the given plant layout and configuration, as well as constraints due to line loading. In our paper we will show how BASF addresses these challenges and illustrate our development work with some recent examples.