

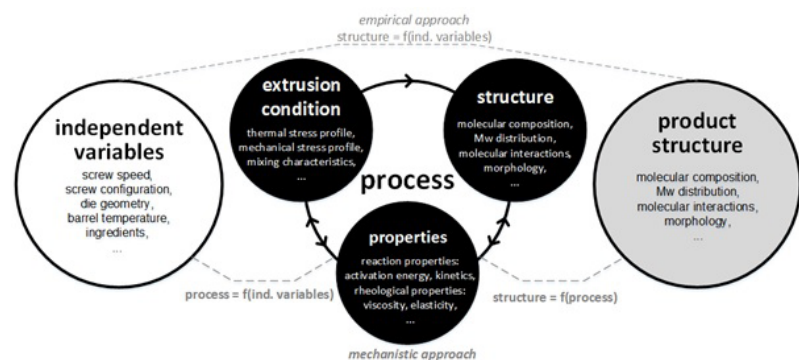
K-07-01**Design of plant based meat analogues by extrusion processing: Towards controlling the structuring mechanisms**
(#34)

M. Azad Emin

Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

Short Abstract

Recent trends in food extrusion technology and research have been mainly (re-)directed to the development of meat analogues, which address the increased consumer awareness of the impact of meat consumption on environment, health, and well-being. Extrusion technology offers the flexibility to process a wide range of plant proteins to achieve products resembling the meat like textures. However, although the history of this technology goes back to the 1960s and the basic principles behind the process are known, a mechanistic insight to this complex process is still missing. Design parameters are not yet well defined. This leads to the difficulties at designing products and scaling the process up, which is currently relied on know-how based trial-and-error approach. Therefore, an aimed improvement of product characteristics and the scale-up of this complex process remain very challenging. To utilize the potential of extrusion process, we have developed a research approach and tools allowing us to characterize the process at mechanistic level. The approach is based on the analysis of the dynamic interrelations between the process conditions and the change in material structure and properties in these sections. This contribution will focus on this approach and the corresponding tools developed with respect to the design of meat analogues by extrusion processing.

**Figure 1.**

Mechanistic interrelation between independent variables, extrusion condition, material pro

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