

Abstract Submitted  
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**Outflow and clogging of shape-anisotropic grains in hoppers<sup>1</sup>**

RALF STANNARIUS, AHMED ASHOUR, SANDRA WEGNER, Otto von Guericke University, Magdeburg, TAMAS BRZSNYI, Hungarian Academy of Sciences, Wigner Research Centre for Physics — Silos have been in use in human history for millennia, but still today, the discharge of grains from silos is a process with potential risks and imponderabilities. Models and quantitative predictions have been developed almost exclusively for spherical grains shapes. We study the discharge and clogging processes of shape-anisotropic grains in hoppers, and describe the peculiarities of these materials both in their dynamical properties and in the observed clogging structures. An attempt is made to adapt the well-known equations for spherical material to describe anisometric particles.

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