



# CMCC Mechanochemistry Discussions

## Online Seminar Series

### *Understanding Mechanochemical Reactions: Real-Time Insights and Collaborative Research*

Livestreaming at  
10:00 AM (CT)

**THURS., September 21, 2023**

on the CMCC YouTube Channel:  
<https://www.youtube.com/channel/UC7eCYPKbGTKpgO7W2bNABxg>



**Dr. Franziska Emmerling**

Federal Institute for Materials Research  
and Testing (BAM) & Humboldt  
University in Berlin, Germany

[https://en.wikipedia.org/wiki/Franziska\\_Emmerling](https://en.wikipedia.org/wiki/Franziska_Emmerling)

#### **ABSTRACT:**

Mechanochemistry has become a compelling method for producing (new) molecules and materials, but the inner workings of the milling jars remain a fascinating mystery. Advances in this field include tailor-made chemical systems and real-time revelations using techniques such as XRD and Raman spectroscopy.

This talk will discuss our recent progress in using X-ray diffraction and sophisticated spectroscopy to observe reactions in various material systems during ball milling and extrusion in real-time.

The complexity of mechanochemical reactions spans multiple scales and requires a holistic approach. The categorization of reactions by investigative methods precedes the exploration of real-time analysis that reveals macroscopic processes using synchrotron techniques.

During this exploration, one resounding realization remains: We are on the threshold of understanding. The complexity of mechanochemistry requires a collective effort, drawing on the expertise of a diverse community. As we unravel the web of mechanochemical phenomena, we acknowledge the collaborative nature of this ongoing journey.



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