Growth of cubic BN (boron nitride) – Siddha Pimputkar

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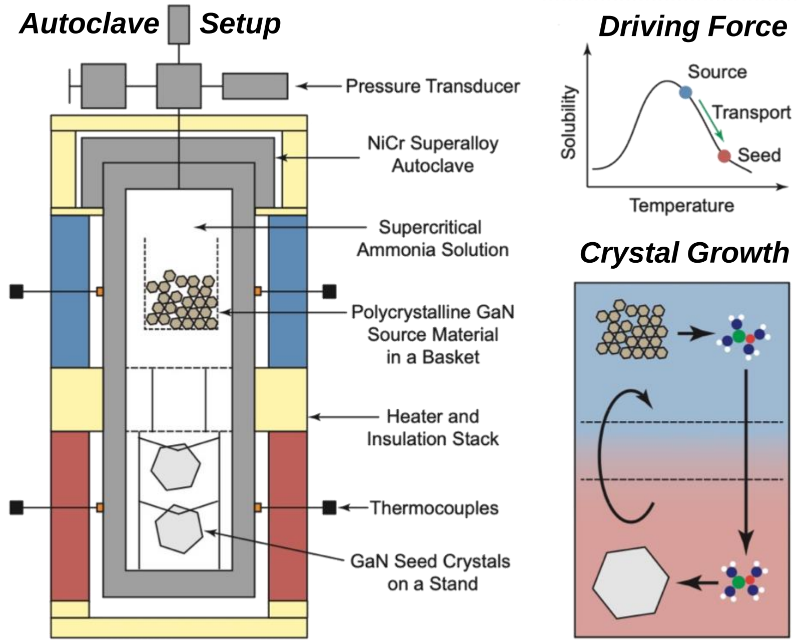
The problem we are addressing is the lack of ability to grow cubic BN using an industrial scalable technology. We are exploring two fundamentally different approaches to its synthesis for the first time.

We use the ammonothermal method and newly developed flux-based approach, *both of which carry great promise to deliver inexpensive, large volume single crystals for use in power/RF device development.*

To learn more:

- **Ammonothermal** method: 10.1016/j.jcrysgro.2014.06.017
- **Na-flux** method to grow GaN: 10.1016/j.jcrysgro.2016.08.018
- **Modeling** work on supercritical ammonia under synthesis conditions: 10.1007/978-3-030-56305-9_14
- See the direction **Ultra-wide bandgap materials and devices** are headed: 10.1002/aelm.201600501

Ammonothermal Method



10.1002/aelm.201600496

Summary: We are building foundational capabilities to synthesis and develop ultra-wide bandgap semiconductors, and ***seek partners to leverage our materials to demonstrate superior power/RF/UV/etc. devices***.