

Approaches to Accelerating Materials Discovery: International Ecosystem Building

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1. Introduction

To achieve net-zero goals by 2050, Natural Resources Canada (NRCan) has supported the uptake of the accelerated materials discovery (AMD) approach for clean energy technologies in research facilities within Canada and around the world, since 2018. This approach couples advanced simulation and modeling on high performance computing with closed loop automation of materials synthesis and characterization, all accelerated by artificial intelligence.

2. International Ecosystem Building

Beyond providing research funding and capital and infrastructure investments [1], NRCan's approach is three-fold, including research excellence, strategic partnerships, and capacity building. This talk will highlight NRCan's work over the last five years toward international network building for training & knowledge mobilization.

To that end, NRCan has led numerous initiatives such as Mission Innovation: Materials for Energy (formerly Innovation Challenge 6: Clean Energy Materials) and the German Canadian Materials Acceleration Centre (GCMAC) [2], in part focused on educating on the AMD approach. This talk will present a case study in NRCan's approach to addressing technology specific challenges in the clean energy technology space for scale-up across the research and innovation continuum via training & knowledge mobilization, as well as connecting in with the broader ecosystem.

3. References

[1] Public Services and Procurement Canada. "Government of Canada Invests in Laboratories to Support Science and Research in Canada." Canada.Ca, Government of Canada, 15 Apr. 2021, www.canada.ca/en/public-services-procurement/news/2021/04/government-of-canada-invests-in-laboratories-to-support-science-and-research-in-canada.html.

[2] Natural Resources Canada. "Government of Canada Announces New German-Canadian Materials Acceleration Centre." Cision Canada, 7 May 2021, www.newswire.ca/news-releases/government-of-canada-announces-new-german-canadian-materials-acceleration-centre-808761841.html.

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