

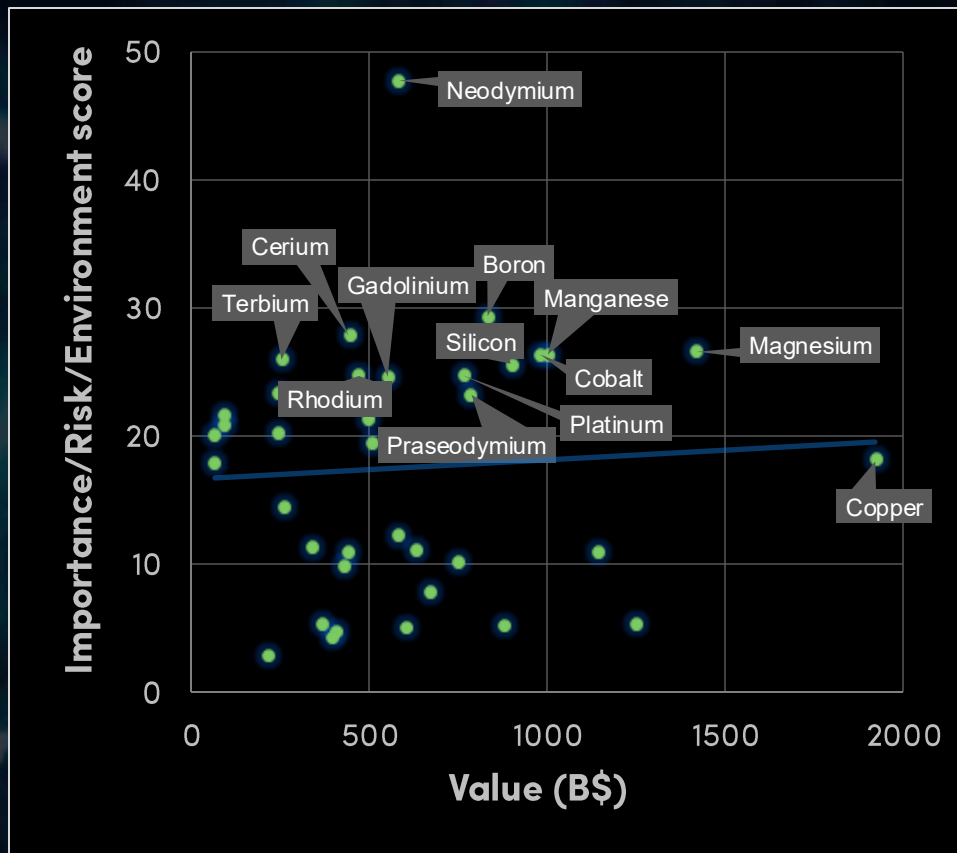


RARA
FACTORY

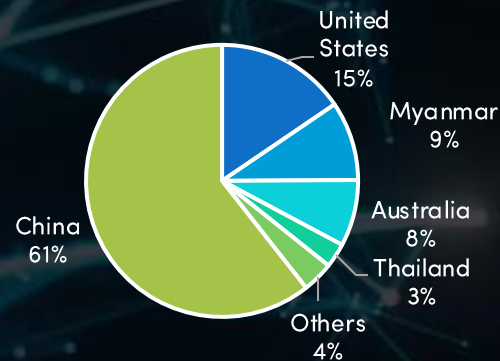
Cracking the code to revolutionary materials
with physics-powered AI



The problem



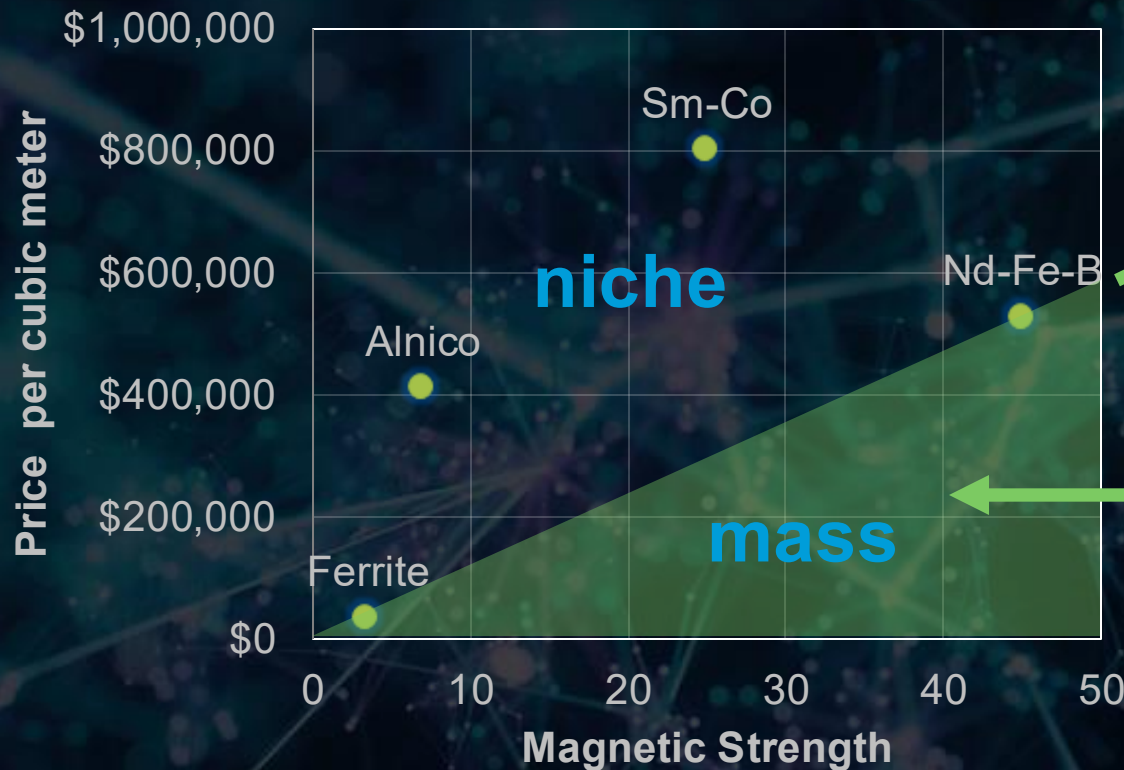
Global Distribution of Rare Earths Production



- Trillion-dollar industries rely on a **limited supply** of **critical raw materials**
- Most of these **key materials** are not in the Western World
- A **geopolitical, environmental and economic threat** to our industries



Permanent Magnets



beyond
neodymium

from niche to
mass markets



Current approaches fail

The old way – Mining & Recycling

- High **pollution & energy costs**
- Mining likely unfeasible with modern-day **environmental policies**
- Recycling **not scalable**

Material discovery – AI-based prediction

- Number of possible combinations of materials: **10^{80}**
- No AI approach has succeeded so far – resulting materials are **only functional in theory** but falter in situ
- Reason: Material combinations are **more than the sum of their parts**





Vision

Replace all critical materials
with compounds made of clean
and abundant elements



Our *patent-pending* technology

Patent office report on Jan 31, 2025: all claims new and inventive

Our proprietary algorithm reveals **fractal clustering of similar materials (tree-like)!**

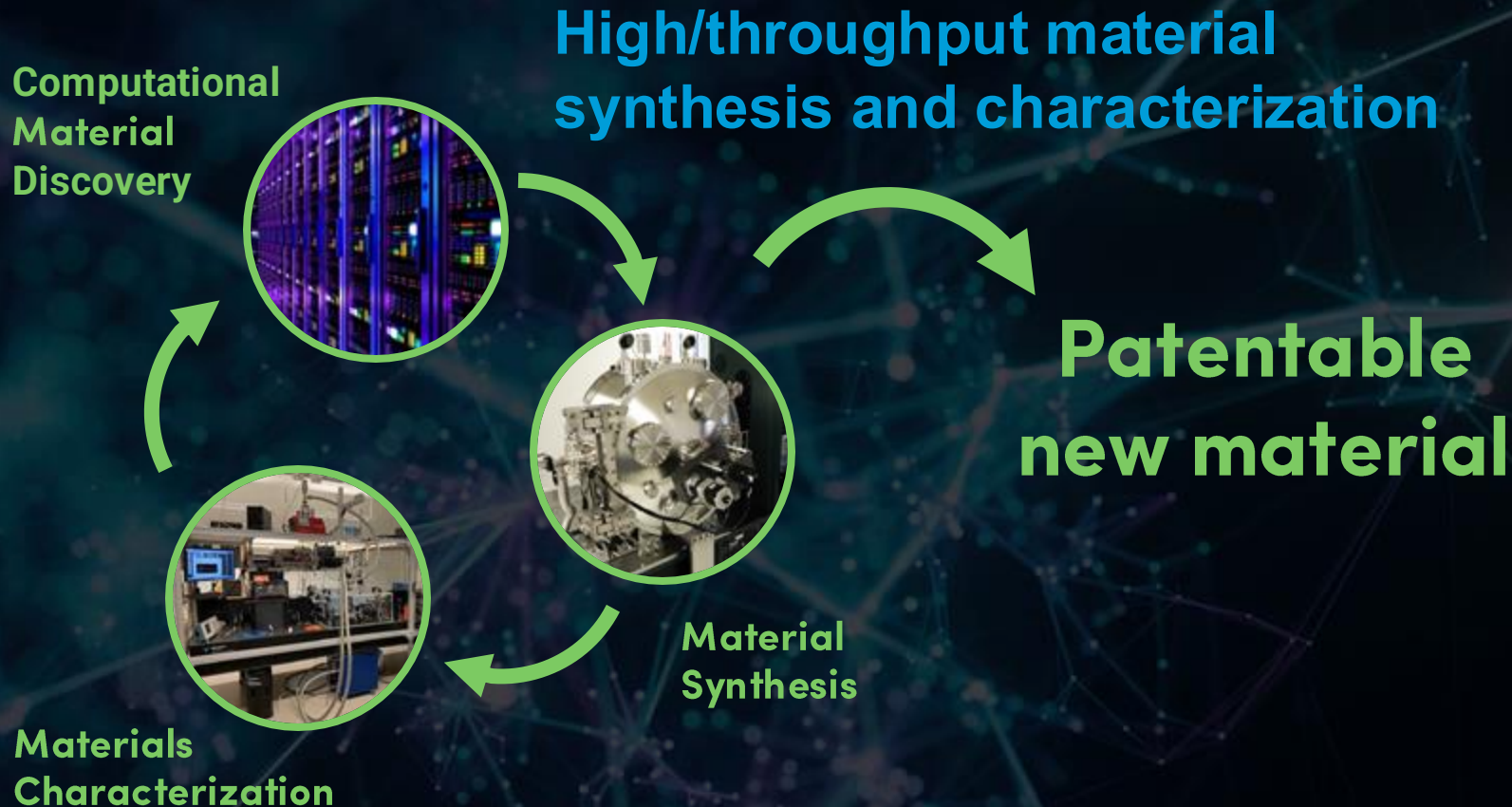
Algorithm tested on the **largest database worldwide of organic materials (OMDB)**,
AND on one of the largest **database of inorganic materials (AFLOW)**

Our own **physics-informed AI generates feasible materials with impressive reliability**





Our one-of-a-kind process

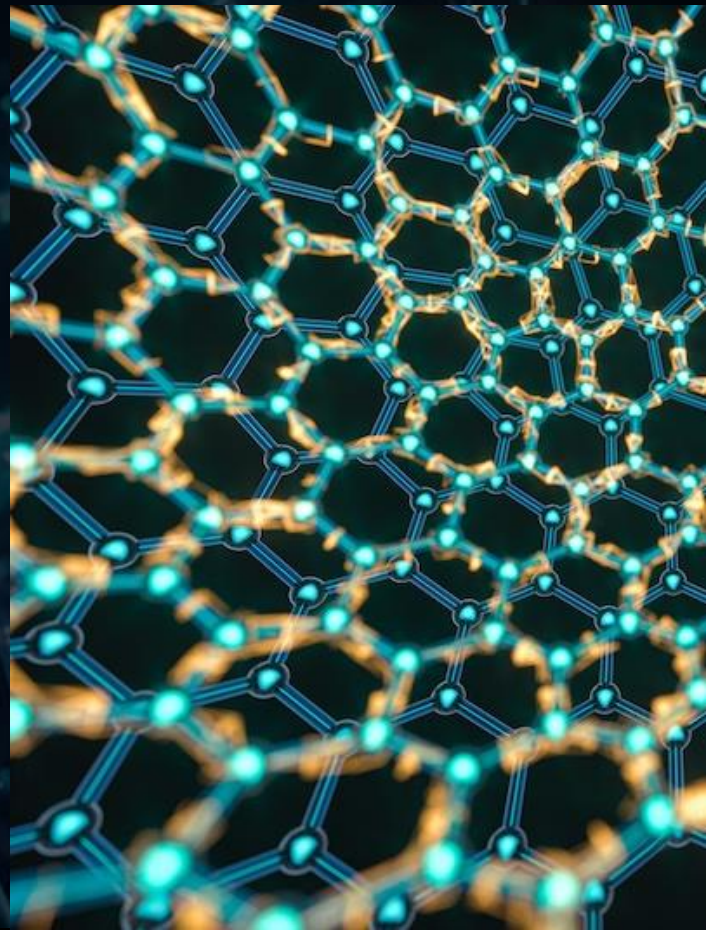




Business Model

Patenting & licensing novel materials

- Patents released on a **royalty-based license of use**
 - Exclusive (single customer)
 - Non-exclusive (multiple customers)
- Patents shared with **JV partners**
 - industrial deployment and integration in production chain





Full Time Team



Stefano Bonetti
Ca' Foscari U. Venice
Lead Founder & Chief Scientific Officer



Michele Bugliesi
Ca' Foscari U. Venice
Founder & Chief Executive Officer

Who we are

- RARA Factory is a spin-off of Ca' Foscari University of Venice
- **100% founder-owned.**
- **100% of the IP developed by RARA stays in RARA**

Scientific Team

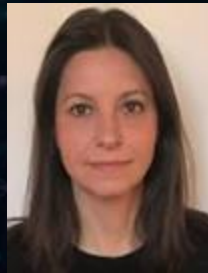


Guido Caldarelli
Ca' Foscari U. Venice
Founder



Alexander Balatsky
UConn / NORDITA
Founder

Business Team



Elvina Finzi
EssilorLuxottica
Advisor



Stefano Micelli
Ca' Foscari U. Venice
Founder



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