

The Materials Genome Initiative

September 25, 2013



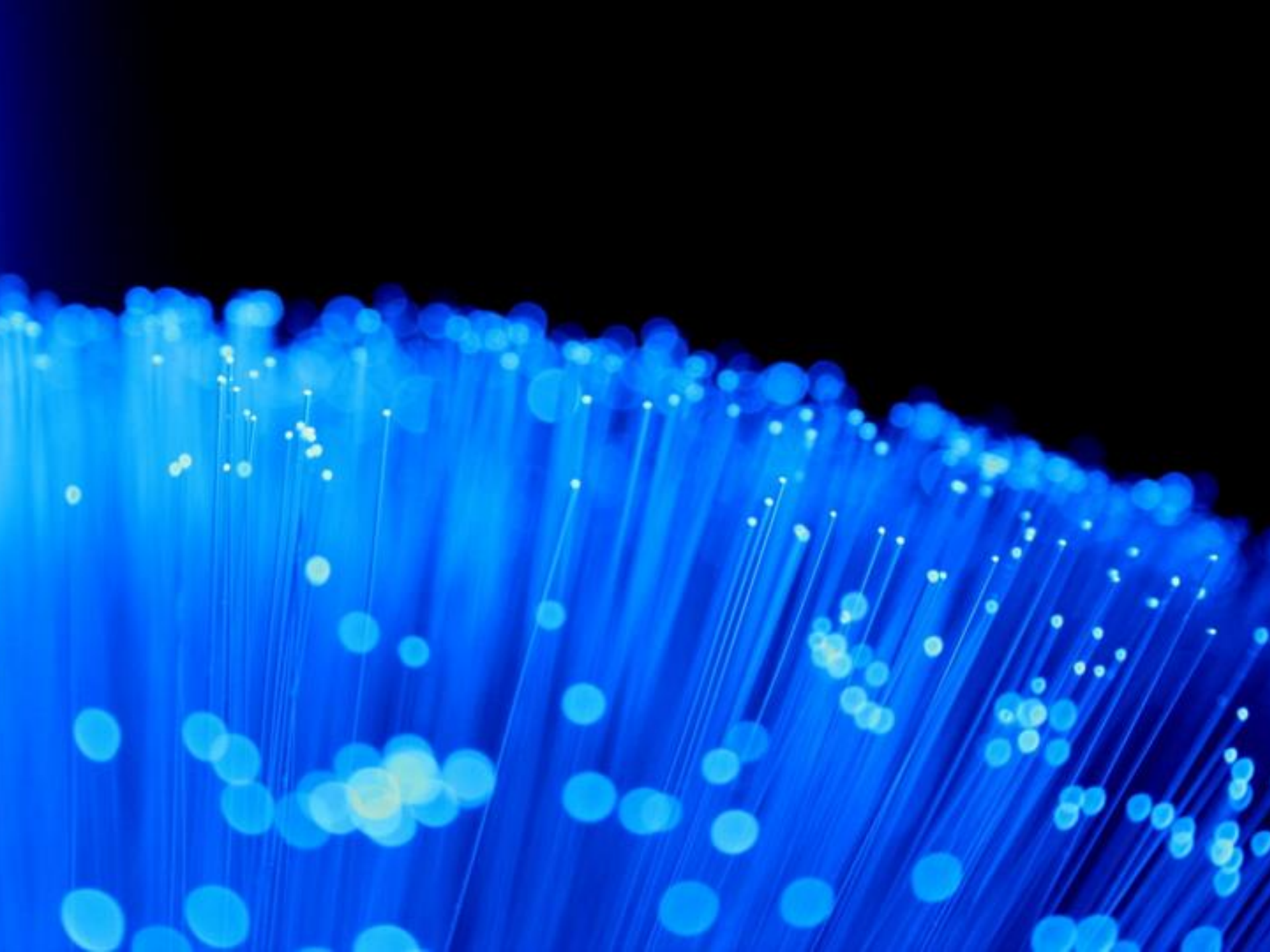
Dr. Cyrus Wadia
Assistant Director, Clean Energy and Materials R&D
White House Office of Science and Technology Policy









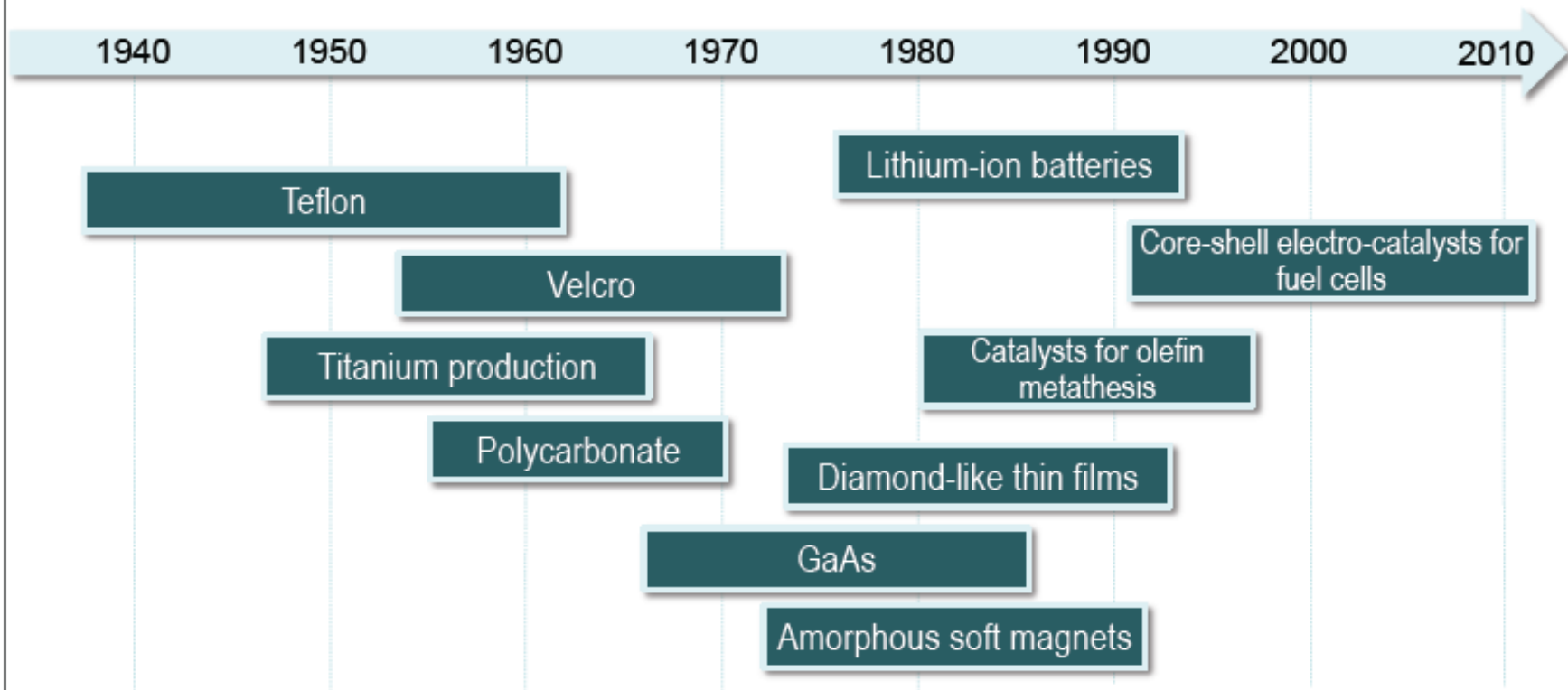






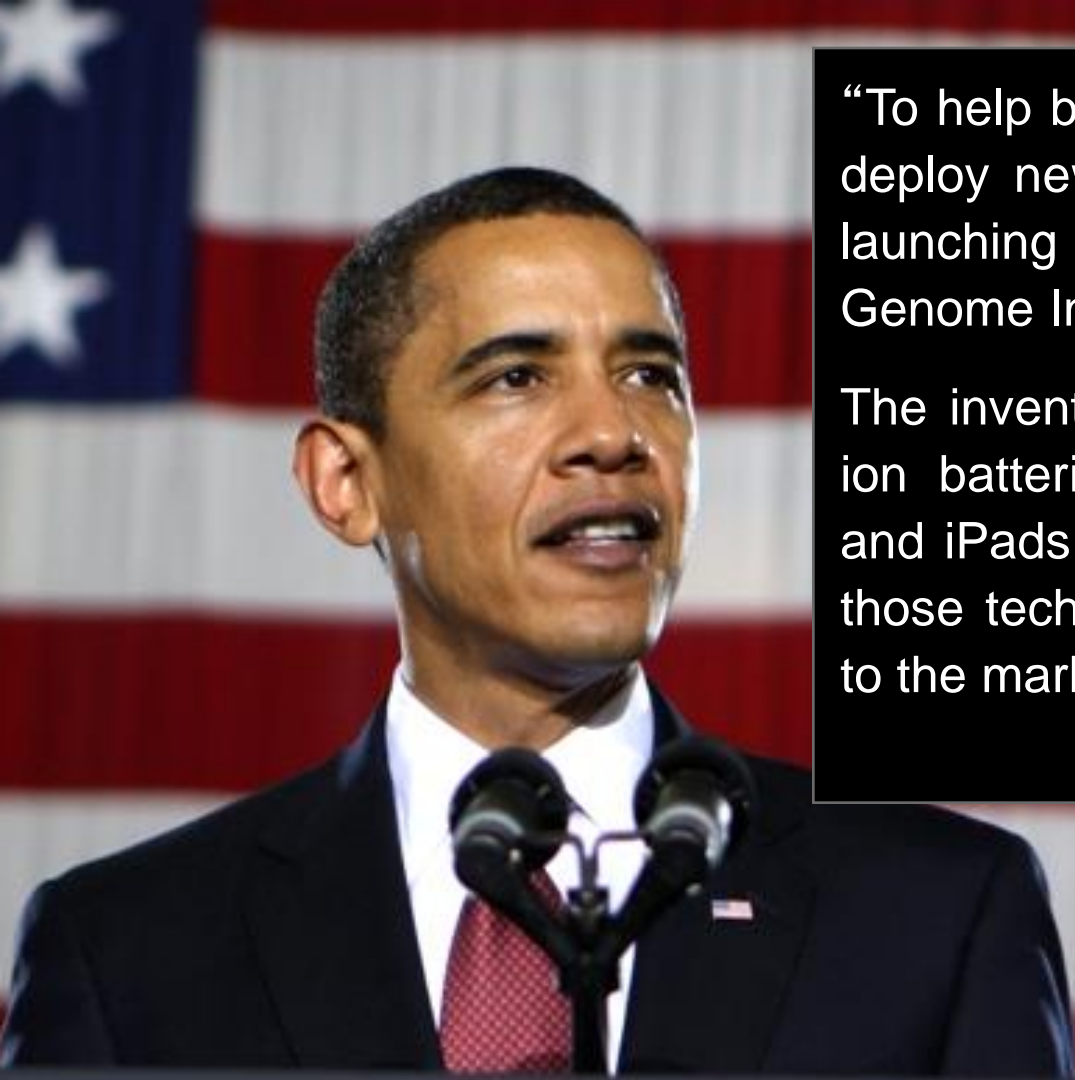


20+ Years to Market



After Gerd Ceder (MIT); materials information from T. W. Eagar and M. King, *Technology Review* 98 (2), 42 (1995).
Catalysis information from R. Schrock et al. and R. Adzic et al.





“To help businesses discover, develop, and deploy new materials twice as fast, we’re launching what we call the Materials Genome Initiative.

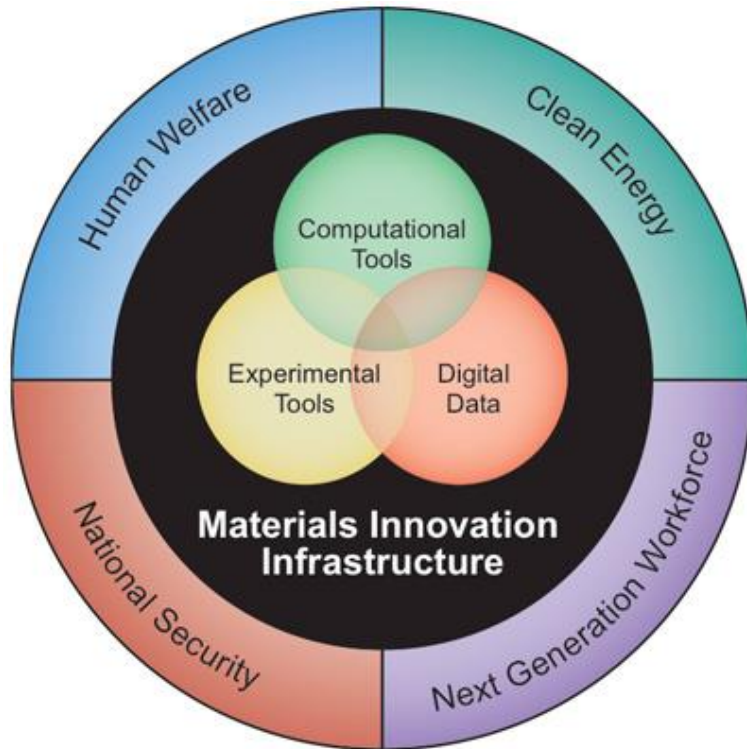
The invention of silicon circuits and lithium ion batteries made computers and iPods and iPads possible, but it took years to get those technologies from the drawing board to the market place. We can do it faster.”

-President Obama (June 2011)



MGI - 2 Core Objectives

A Unique Challenge for Federal Action

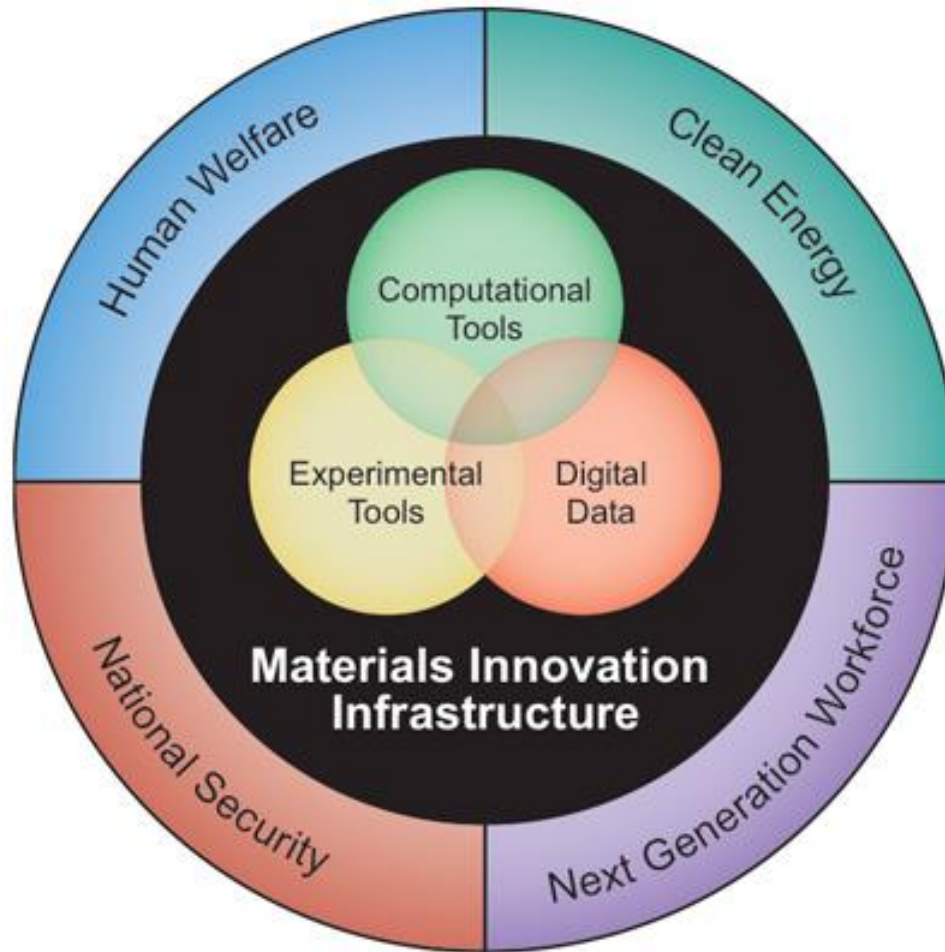


1. INFRASTRUCTURE

2. CULTURE



The Materials Innovation Infrastructure



Achieving the Vision

The Last Two Years

- \$63M in FY 2012 (DOE, NSF, DOD, NIST)
- Leveraging existing investments and building a strong tie-in to other Federal programs (National Nanotechnology Initiative, National Network for Manufacturing Innovation, open data)
- A few hundred million in MGI pledges made by over 60 institutions
- Commitments from 30 universities (curricula, degree programs, etc.)
- Chartered a formal NSTC Subcommittee for active interagency coordination
- Multiple stakeholder meetings on MGI (NSF, DOD, NIST, DOE, scientific societies)



News This Summer

Over 24 New Commitments

- NIST announced \$25 million for new Center of Excellence
- Harvard/IBM Debut Database of 2.3 million new materials
- ASM/NIST partnership on open data repository pilot
- DARPA, US Army, NASA Partner on Data Repository
- Lawrence Berkeley National Laboratory/Intermolecular form Public-Private Collaboration
- 8 universities announce efforts to improve MGI education
- 5 universities commit to host regional meetings
- Strategic Plan & Community Input
- Start of a Materials Innovation Accelerator Network

