

Beyond the Lab and Far Away

Immediate and Future Challenges in Governing the Bio-Economy



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Black Box of Convergence

Synthetic Biology

Nanotechnology

Advanced Manufacturing

3-D Printing

Geo-Engineering

DIYBIO

Black Box of Convergence



\$250

Maker Kit

+ glowing plant seeds!



A maker kit so that you can genetically transform you or at a lab like Biocurious or Genspace. The kit will contain:

- Full instructions for how to make a glowing plant
- Copy of the coffee table book with visual descriptions of what you need to do
- A vial of Glowing Plant DNA
- Pre-poured LB plates (2 plates)
- Arabidopsis seeds
- Agro-bacterium
- Small pot and soil
- Silwet
- Nutrient solution
- Petri dish for germinating seeds



\$90

Book: How to make a glowing plant

+ glowing plant seeds!



How to make a glowing plant



Be sent our coffee-table book packed full of pictures of the project so you can show your friends how to make a GlowingPlant at home

Challenges

- **Governance**

- U.S.
 - Coordinated Framework
 - TSCA
 - IP
- Global
 - Convention on Biological Diversity
 - Nagoya Protocol (access and benefits sharing of genetic resources)
 - Global discussion on acceptance of GMOs
 - IP

- **Ecological Assessments**

- Moving targets (technically and biologically)

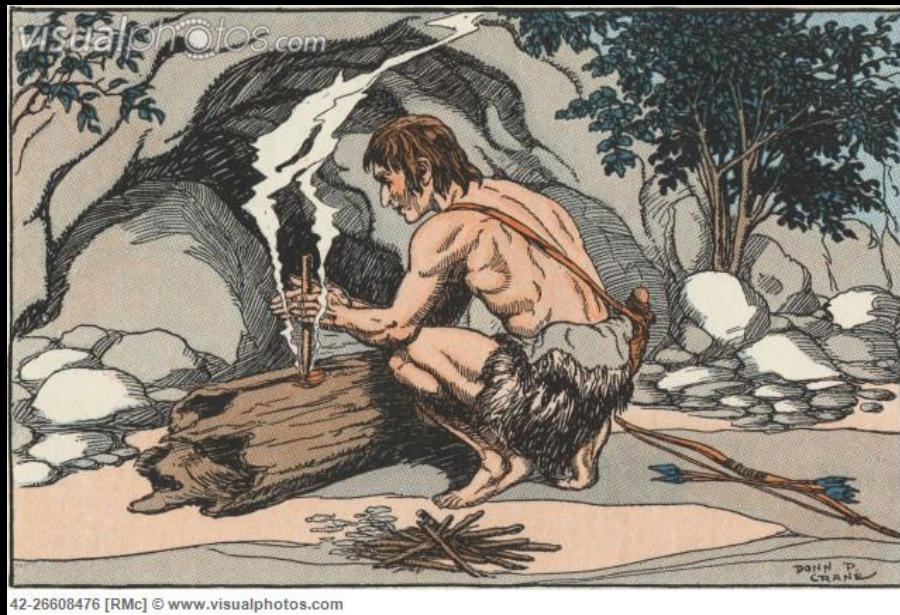
- **Societal**

- Access
 - Governance of distributed technologies (DIYBIO)?
- Funding
- Acceptance

Opportunities

- New Governance Structures
 - Flexible regulations
- New Funding Models
 - Better coordination
 - Within agencies and amongst agencies
 - Ecological Assessment studies co-funded with basic research
- Democratization of Science
 - How does crowd sourced funding and access to technology change the game?

First Convergence Technology??



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Would fire's advancement and all the technologies that followed have been established if governance structures were debated and implemented at today's pace?



www.nanotechproject.org



www.synbioproject.org



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