



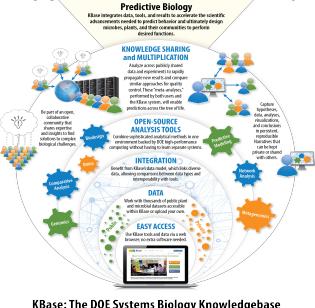
<http://kbase.us>

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Overview The U.S. Department of Energy Systems Biology Knowledgebase (KBase, <http://kbase.us>) integrates commonly used core tools, reference and experimental data, and overlays them with new capabilities for visualization, exploration, and predictive analysis with KBase-generated recommendations designed to accelerate our understanding of microbes, plants and their communities.



Highlights

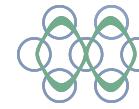
KBase is an open bioinformatics platform for predictive systems biology that lets you:

- ◊ Generate hypotheses
- ◊ Develop analysis workflows
- ◊ Build models
- ◊ Create visualizations
- ◊ Share with collaborators

KBase Narrative Interface

Scaling Collaborative Science for Predictive Biology and Materials Design

Dan Gunter, Data Science and Technology Department, Computational Research Division, LBNL



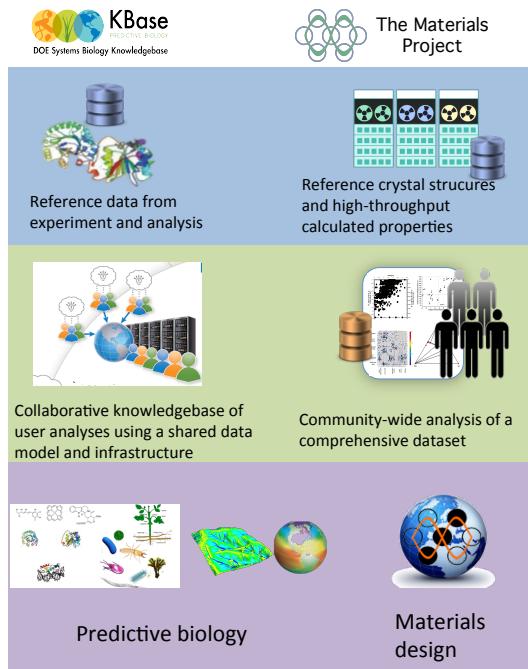
<http://materialsproject.org>

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Synergy The Materials Project and KBase exhibit strong parallels in approach to solve grand challenge problems in their respective domains.



Overview In June 2011, the Obama administration announced the Materials Genome Initiative (MGI), whose mission is to

"fund computational tools, software, new methods ... to make the **process of discovery and development of advanced materials faster, less expensive, and more predictable**".

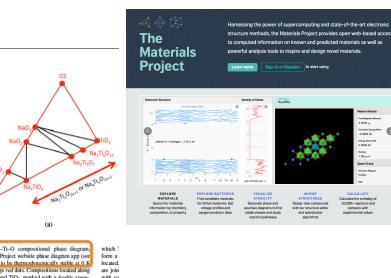
The Materials Project is one of the first and most successful efforts to date that is working towards that vision.

Highlights The Materials Project provides an infrastructure that enables collaborative scaling of materials analysis. This is made possible in large part by state-of-the-art codes developed by the project: pymatgen and FireWorks. Together, these tools run the Vienna Ab-initio Simulation Package (VASP) and other codes across all known inorganic materials on NERSC supercomputing resources.

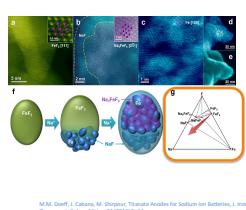


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Data is disseminated through a state of the art website and has been used in over 50 outside papers.



K. He, Y. Zhou, P. Gao, L. Wang, N. Pereira, G.G. Amatucci, et al., *Solid-state Na_xTi_yO_z Interphase Disproportionation in Full Electrodes for Sodium-Ion Batteries*, *ACS Nano*, 8 (2014) 7720-7727.



M.M. Scott, J. Callewaert, M. Shupoor, *Trigonal Anodes for Sodium-Ion Batteries*, *J. Power Sources*, 169 (2007) 121-125.

which is from a paper that we are just now trying to figure it