

## About COVIDScholar

This website uses natural language processing (NLP) to power search on a set of research papers related to COVID-19. It was created by the team behind Matscholar, a research effort led by the HackingMaterials, Persson, and Ceder research groups at Lawrence Berkeley National Lab.

### **Contents**

Mission.....	4
Research Papers .....	5
Administrative Information.....	5

DEMONSTRATION ONLY

DEMONSTRATION ONLY



## Lawrence Berkeley National Lab (LBNL)

### Stakeholder(s):

#### COVIDScholar Team

#### Gerbrand Ceder :

Gerbrand Ceder is The Daniel M. Tellep Distinguished Professor in Engineering in the Department of Materials Science and Engineering at UC Berkeley. His research interests lie in computational and experimental materials design for clean energy technology, Materials Genome approaches to materials design and synthesis, and machine learning and NLP approaches to knowledge extraction.

#### Kristin Persson :

Kristin Persson is a Professor at the University of California, Berkeley and a Senior Faculty Scientist at Lawrence Berkeley National Laboratory. She is the Director and co-founder of the Materials Project ([www.materialsproject.org](http://www.materialsproject.org)).

#### John Dagdelen :

John is a PhD Student in the Persson Group at UC Berkeley and Lawrence Berkeley National Lab. His research sits at the intersection of materials science, artificial intelligence, and high-performance computing. John is also part of the team behind Matscholar, a materials science knowledge portal that uses state of the art NLP to aid in materials discovery and design.

#### Amalie Trewartha :

Amalie is a postdoc in Gerbrand Ceder's group at Lawrence Berkeley National Lab. She began her career as a nuclear physicist, before moving into materials science in 2019, with a focus on machine learning. Her research interests include the application of NLP techniques to scientific literature, and building thermodynamically-motivated ML models for materials property prediction.

#### Haoyan Huo :

Haoyan joined Ceder Group at UC Berkeley as a PhD student in 2017. He is interested in making computers read papers and learn how to cook materials using the knowledge mined from the scientific literature knowledge base.

#### Kevin Cruse :

Kevin joined the Ceder Group at UC Berkeley as a Ph.D. student in 2019. He uses text mining and machine learning techniques to extract synthesis recipes from materials science literature.

#### Yuxing Fei :

Yuxing joined Ceder Group at UC Berkeley in 2020 as an undergraduate intern. He avidly dabbles in machine learning (especially natural language processing) to accelerate the design of next-generation materials.

#### Zheren Wang :

Zheren joined Ceder Group at UC Berkeley and LBNL in 2018 as a Ph.D. student. He focuses on using machine learning and optimization algorithm to find material synthesis conditions.

#### Tanjin He :

Tanjin joined the Ceder Group as a Ph.D. student in 2017. His research interest includes materials synthesis and machine learning. He utilizes NLP methods to extract materials information from scientific literature and learns how to predict synthesis from the big data.

#### Francois Chabbey :

Having worked on embedded and mobile applications in Switzerland, Francois moved to the Bay Area and reoriented himself toward front-end and web applications. After building various BI tools and data pipeline applications with two start-ups, he decided to join the Person Group at Lawrence Berkeley National Lab to build visualizations.

#### US Department of Energy :

This work is currently funded by a Laboratory Directed Research and Development grant at the Lawrence Berkeley National Laboratory of the US Department of Energy.

#### National Science Foundation :

It was assisted by funding for the development of NLP tools in Materials Science from the Energy Biosciences Institute at UC Berkeley, and from the National Science Foundation.

#### Materials Science from the Energy Biosciences Institute

#### National Energy Research Scientific Computing Center (NERSC) :

COVIDScholar was built using computing resources from the National Energy Research Scientific Computing Center (NERSC) and makes use of NERSC's Spin container cloud platform service.

#### COVIDScholar Data Sources :

COVIDScholar Data — COVIDScholar's data is collected from a number of sources, listed below.

#### Semantic Scholar :

COVID-19 Open Research Dataset - Provided by Semantic Scholar - Wang, Lucy Lu et al. "CORD-19: The Covid-19 Open Research Dataset." (2020).

— continued next page

Stakeholders (continued)

**Elsevier :**

*Elsevier Novel Coronavirus Information Center - Provided by Elsevier - Elsevier's free health and medical research on the novel coronavirus (SARS-CoV-2) and COVID-19.*

**National Center for Biotechnology Information :**

*LitCovid - Provided by National Center for Biotechnology Information - NLM/NCBI BioNLP Research Group Zhiyong Lu, PhD Qingyu Chen, PhD Alexis Allot, PhD*

**Researchers :**

*COVIDScholar User Submissions - Provided by researchers - Documents, summaries, and metadata submitted by researchers.*

**Publishers :**

*If you are a publisher of scientific research or datasets and would like to have your data integrated into COVIDScholar, please contact [jdagdelen@lbl.gov](mailto:jdagdelen@lbl.gov).*

## Mission

To power search on a set of research papers related to COVID-19.

DEMONSTRATION ONLY

## Research Papers

*Enable discovery of research papers related to COVID-19.*

### Administrative Information

**Start Date:**

**End Date:**

**Publication Date:** 2020-05-18

**Source:** <https://www.covidscholar.org/about>

**Submitter:**

**Given Name:** Owen

**Surname:** Ambur

**Email:** [Owen.Ambur@verizon.net](mailto:Owen.Ambur@verizon.net)

**Phone:**

DEMONSTRATION