

Multi-identifiers on Science Data Bank

An open and general-purpose data repository

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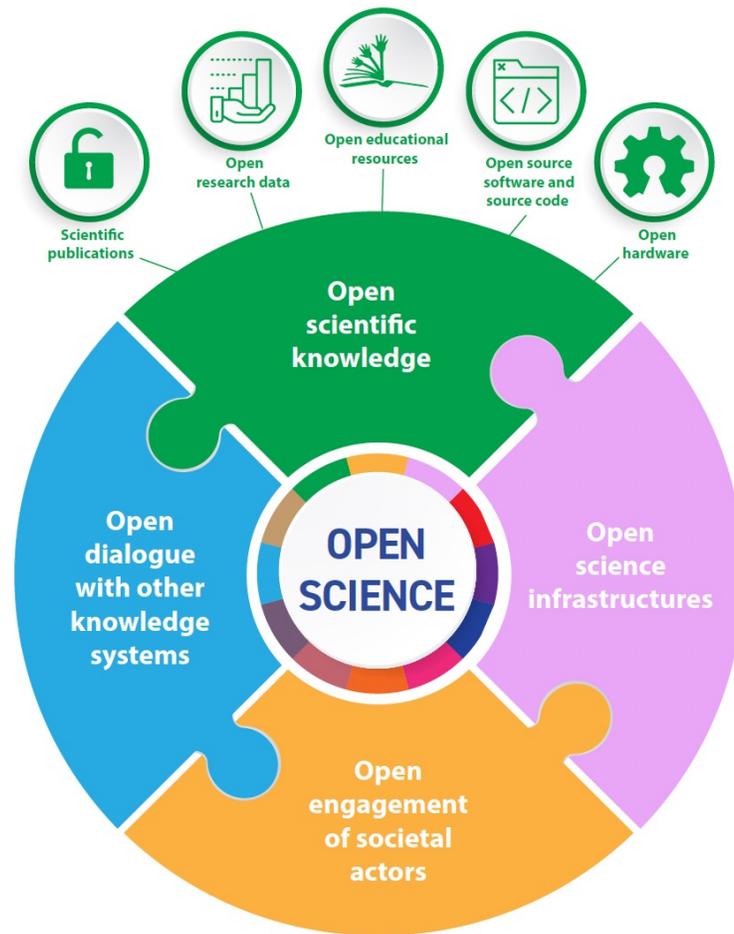
29th Sep. 2023 · Better Together

Open Research Data

Why share research data openly



UNESCO Recommendation on Open Science



Benefits

- Credits the research
- Enables replication
- Easier access
- Reduces unnecessary experiments
- Improves usability
- Informs policy
- Increases trust
- Clear economic benefits
- Builds new collaboration
- Improves future research
- Increases innovation
- Enables public understanding
- Benefits teaching
- Advances research
-



Why Share your Data on Data Repositories?

How to share research data effectively?

- Publish a data paper / data description
- Publish a data availability statement
- Deposit research data on a **data repository**



Putting data in repositories was the only method of data sharing significantly correlated with citation impact. This suggests that more common methods, such as sharing via SI, are of less value to a researcher in gaining credit.

The citation advantage of linking publications to research data (2020)
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0230416>

How to share research data effectively?

Benefits of depositing research data on a data repository

↑ Benefits

1. Data size is unlimited
2. Flexible data sharing mode
3. Version controls
4. Specific Data Usage license
5. Data could be formally cited
6. Disseminate independently
7. Long-term preservation
8. Tracking data usage and citation metrics

... ..

Cold-induced *Arabidopsis* FRIGIDA nuclear condensates for FLC repression

Reporting summary

Further information on research design is available in the [Nature Research Reporting Summary](#) linked to this article.

Data availability

Full lists of mass spectrometry are provided as Supplementary Table 1. Raw images of western blots and Supplementary Fig. 1. Other raw images that support the findings of this study are available at <https://doi.org/10.11922/sciencedb.01119>. Source data are provided with this paper.

References

1. Yang, H. et al. Distinct phases of Polycomb silencing to hold epigenetic memory of cold in *Arabidopsis*.

PUBLIC | Published on 2021-09-06 | Updated on 2021-11-04 | CC BY 4.0

Cold-induced *Arabidopsis* FRIGIDA nuclear condensates for FLC repression

VERSION: 2

Pan Zhu, Clare Lister, Caroline Dean

DOI: 10.11922/sciencedb.01119

DESCRIPTION

This contains all the raw images supporting the findings in the Article "Cold-induced *Arabidopsis* FRIGIDA nuclear condensates for FLC repression".

DATA FILES

- Extended Data Figure 1e & f
 - SWW.JPG (6.38 MB)
 - NW.JPG (1.76 MB)
- Extended Data Figure 2a
- Extended Data Figure 2b & 8f
- Extended Data Figure 2e & f

INFO

Corresponding authors email : caroline.dean@jic.ac.uk

Data volume : 93.57 GB

File counts : 1,152

Funding information : UK Biotechnology and Biological Sciences Research Council Institute Strategic Program (Grant No.BB/P013511/1)

Publication | Export | Information

Cold-induced *Arabidopsis* FRIGIDA nuclear condensates for FLC repression

Zhu, P., Lister, C. & Dean, C. Cold-induced *Arabidopsis* FRIGIDA nuclear condensates for FLC repression. *Nature* (2021). <https://doi.org/10.1038/s41586-021-04062-5>

RECOMMENDATIONS (DATASETS)

An inventory dataset of glacier and glacial lake related hazards (events) along the China-Pakistan Economic Corridor

A dataset for infrared image dim-small aircraft target detection and tracking under ground / air background

MODIS daily cloud-free snow cover product over the Tibetan Plateau

Ultraviolet radiation datasets in Chinese terrestrial ecosystems

2010年中国生态系统服务空间数据集

1km spatial resolution of temperature and precipitation in China in 2000-2012 raster data set

How to share research data effectively?

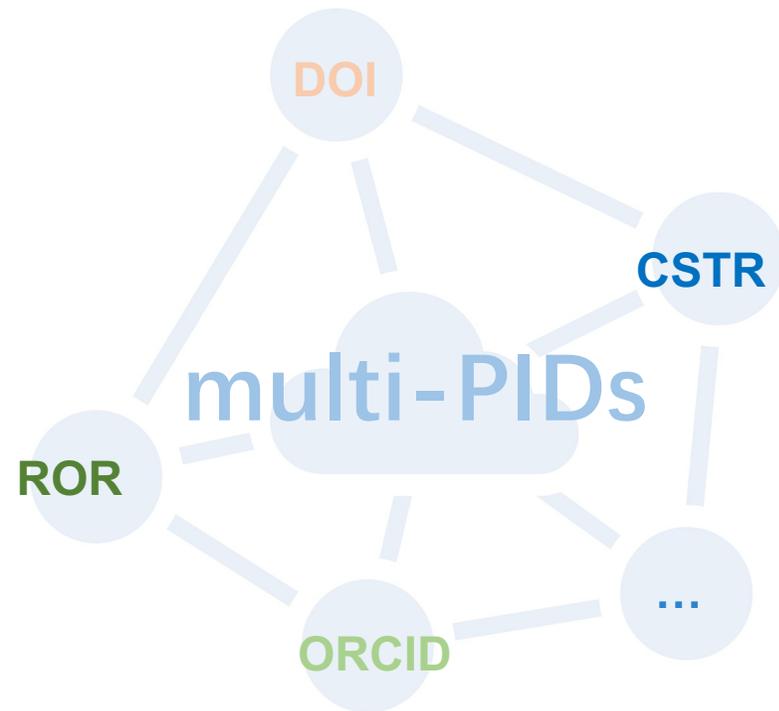
Benefits of depositing research data on a data repository

Ensure reliability and stability

Policies and standards compliant service

Enhance the connectivity and dissemination internationally

Track data usages





About Science Data Bank

Brief introduction

A non-profit, open and public general-purpose data repository

Science Data Bank provides data publishing and accessing service to the international science community. It is built and maintained by **Computer Network Information Center, Chinese Academy of Sciences**.

It ensures the **long-term management, persistent accessible** to the data released on it and aims to foster research data compliant with agreed data standards and conventions, promoting the **F**indability, **A**ccessibility, **I**nteroperability and **R**eusability of research data, and cultivate data sharing culture in China science community.

Science Data Bank
科学数据银行

Home Browse Data Data Community Our Partner Help About Log in Submit data

An Open Trustworthy Global Public Product for Data Publishing

Born for researchers
Dedicated to open science
Ensure long-term preservation and data security,
promote FAIR sharing and activate data value

Submit data

Search data on ScienceDB

Latest Datasets Popular Datasets Most Cited Datasets

Russian Far East 30m Fire Traces Spatial Dataset (2019)
王宗明
DOI: 10.57760/sciencedb.GA.00021

Russian Far East 30m Fire Traces Spatial Dataset (1990)
王宗明
DOI: 10.57760/sciencedb.GA.00022

Spatial Dataset of 30m Cultivated Land in the Far East of Russia (1990)
王宗明
DOI: 10.57760/sciencedb.GA.00019

Additional Spatial Dataset for the 30m Fire Trail in the Far East of Russia...
王宗明
DOI: 10.57760/sciencedb.GA.00023

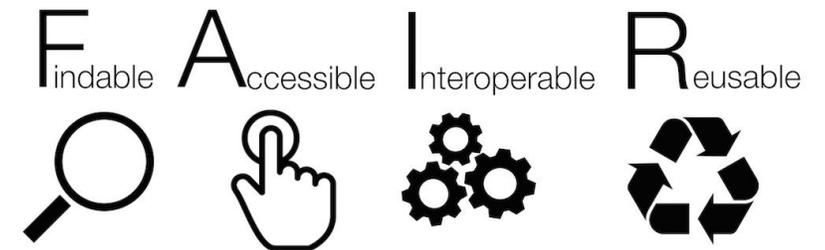
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7,083,823 Open datasets
821,631,895 Page views
363,106 ^{GB} Data volume
22,782,942 File downloads

科学数据银行
Science Data Bank

Our Concept

- To make research data sharing **easy** and **low-cost**
- To support peer-review of associated articles
- To ensure **data integrity** and **long-term preservation**
- To ensure data **as open as possible, as closed as necessary**
- To facilitate data reuse and protect rights & interests
- To enhance data dissemination and findability
- To **track** data usages and to incentivize data sharing



Milestones

2015

ScienceDB was launched

Initiated data publishing in China with *China Scientific Data*, first data journal in China



2019

Upgraded comprehensively

Provide more general-purpose services to journals
Practice FAIR principles
Aiming to serve global researchers

A Generalist Repository

- Multi-disciplinary
- Open service to global researchers / data depositors
- Any research data type, including code & software
- Any file size

2021

Recommended by more
and more publishers and journals



Google Dataset Search

 Mendeley Data

Milestones

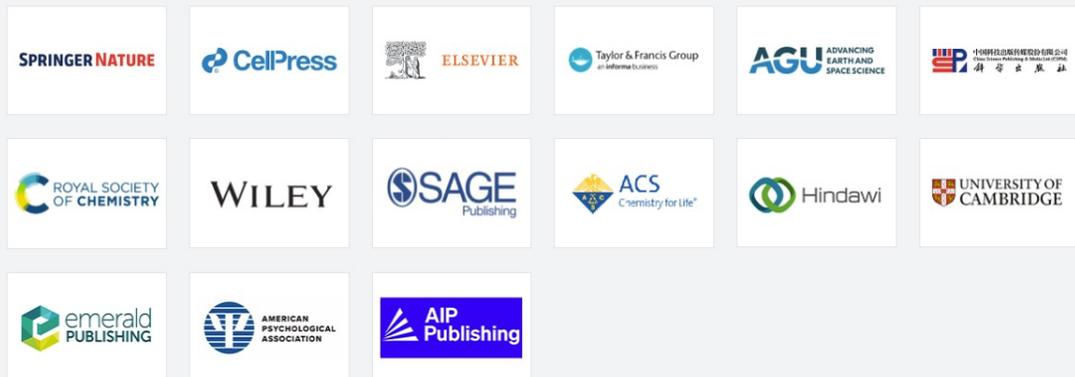
2022

As designated Platform by multiple policies from

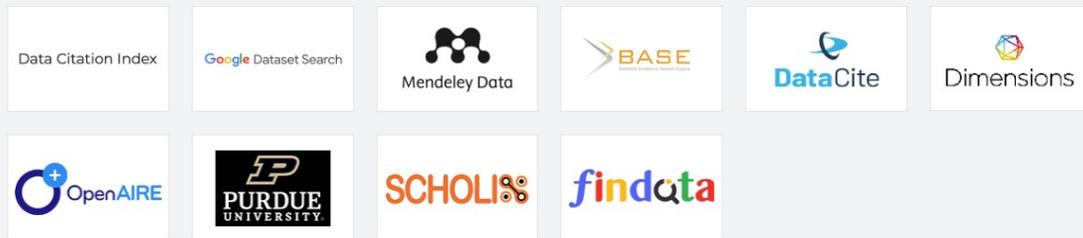
- Chinese Academy of Sciences
- National Press and Publication Administration
- China Association for Science and Technology

Become the member of DataCite
Indexed by Scholix

Recommended by publishers and academic journals



Indexed by international databases



Our Co-constructing Partners



Till now, depositors cross more than **90 countries/regions** have shared their research data on ScienceDB.

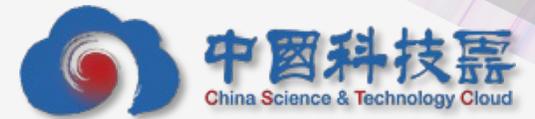
Researchers from **over 190 countries/regions** have downloaded research data for their research



How ScienceDB integrates multi- identifiers with services

Ensure reliability and stability

- ✓ The whole infrastructure environment is equipped with multi-dimensional and 7*24h monitoring mechanism
- ✓ **Level III security guarantee** of infrastructure
- ✓ Supported by very huge data storage environment, powerful data processing and disaster recovery capabilities
 - Building on China Science & Technology Cloud (**CSTC**)
 - **PB Level storage** and processing capabilities
- ✓ Stable and unblocked network transmission, **ensuring global fast access**
 - 2800+ global CDN nodes
 - **500+ overseas CDN nodes**
 - Transiting upon Chinese Science & Technology Network (**CSTNET**)



国际出口带宽**113G**
美国科研网：**10G**
欧洲科研网：**20G**
香港交换节点：**83G**

国际科研节点**3个**
HKOEP
PacificWave
StarLight



Easy-to-use with transparency and flexible process

- ✓ The repository is open to the global scholar community

Anyone can easily share their data on ScienceDB via following steps:

Login / upload data / review / publish / disseminate

- ✓ Integration-flexibility with a third-part **manuscript system**

Depositor can get a **private link** for pre-publication peer-review

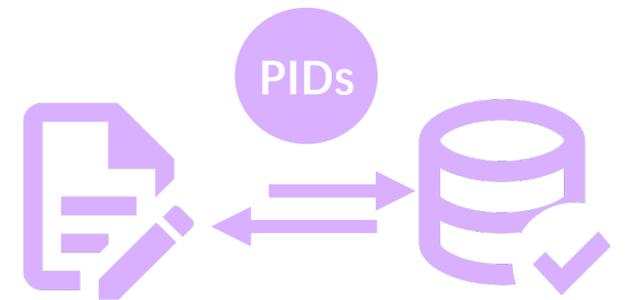
Supporting double-blind peer-review with an **anonymous link**

- ✓ Multiple data accessing modes service

Open Access / Embargoed / Restricted Access

- ✓ Cloud mode service, **SaaS**

Provide Data Portal services to academic journals to promote their practices on research data, primarily for the journals in China



Policies and standards compliant service

- ✓ All the data are equipped with unique identifier, both **DOI + CSTR**
- ✓ **Metadata** is in compliance with **standards**
Schema.org / OAI-PMH / Dublin Core / DataCite
ensure **machine-readability**
- ✓ Provide **citing format service**
Citation Style Language(CSL) / DataCite
The Joint Declaration of Data Citation Principles(JDDCP)
- ✓ Explicit **data license**
All the metadata are under CC0
Data files' license depends on depositors
Provides 7 cc license, 12 software license, and 3 ODC license options to users

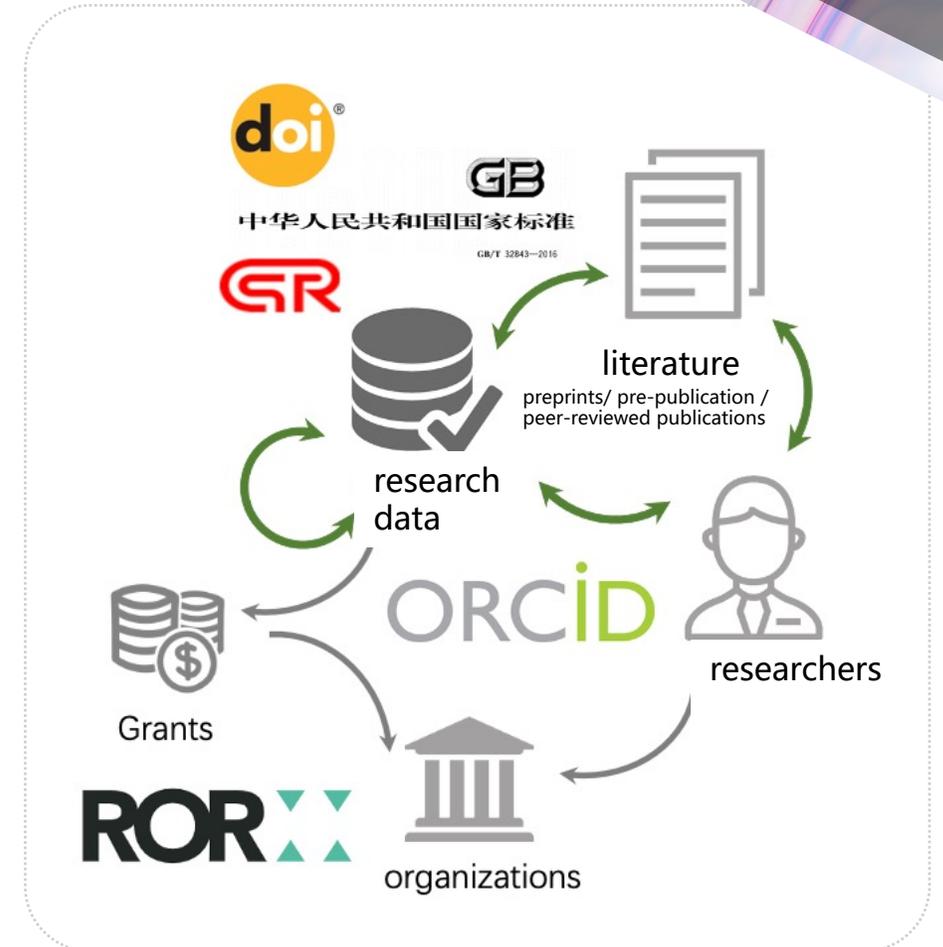
1) Creative Commons Licenses

2) Open Data Commons License

3) Software Licenses

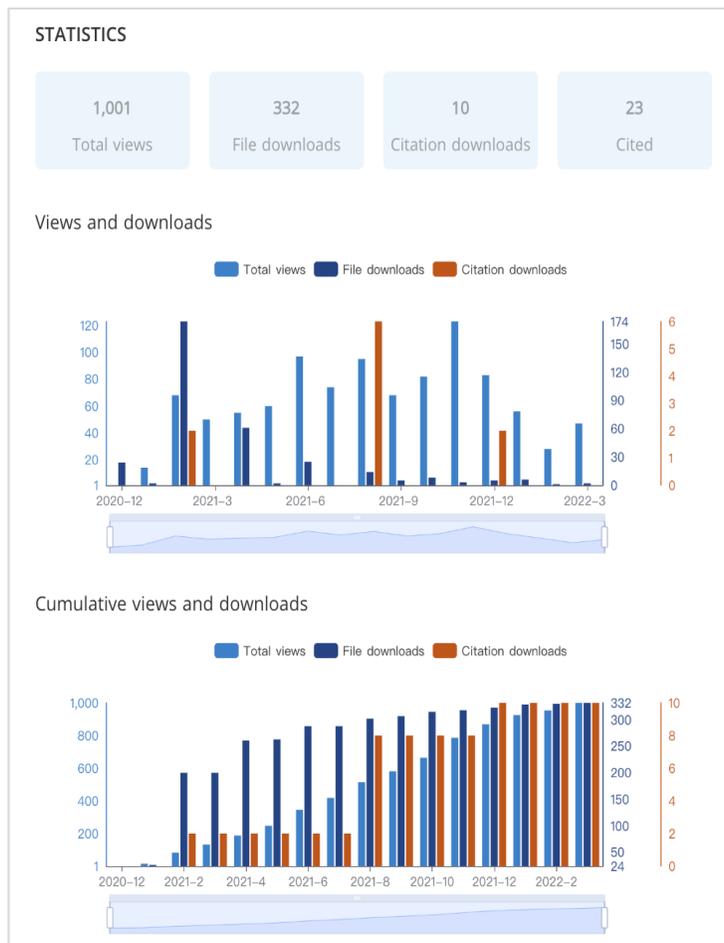
Enhance the connectivity and dissemination internationally

- ✓ All the metadata require to be at least **in English**
- ✓ Data can be **indexed** by external databases
- ✓ Committed to practicing **FAIR principles**
 - **Persistent identifiers**
datasets | data files | researchers | institutions
 - **Make entities linked basing PIDs**
data - literature (associate with | is cited by | reference to)
data - data (cited by | reference to)
Indexed by **Scholix**
 - Submit the above info. to DataCite



Track data usages

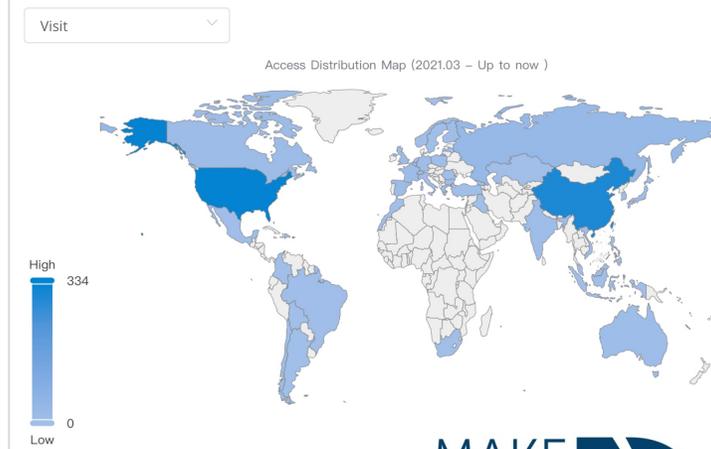
- ✓ Plot **geographical-distributions** of data views / downloads
 - Endorse **Make Data Count** with pushing corresponding metrics onto DataCite monthly
- ✓ Tracking **citations** of data on ScienceDB via **identifiers**
- ✓ Collect users' feedback on data
 - favorites / likes / shares
- ✓ Depict portraits of researchers and institutes on data sharing



CITING ARTICLES

- [1] Wang, Wei-Yang, et al. "Magnetospheric curvature radiation by bursts of repeating fast radio bursts." *The Astrophysical Journal* 927.1 (2022): 105. [CSCD](#) [Google Scholar](#)
- [2] Lin, HaiNan, Xin Li, and Li Tang. "Search for the correlations between host properties and radio bursts: constraints on the baryon mass fraction in IGM." *Chinese Physics C* (2022). [CSCD](#) [Google Scholar](#) [Baidu Scholar](#)
- [3] Chaikova, Anastasia, Dmitriy Kostunin, and Sergei B. Popov. "Model-independent classification of events from the first CHIME/FRB Fast Radio Burst catalog." *arXiv preprint arXiv:2202.10076* (2022). [CSCD](#) [Google Scholar](#) [Baidu Scholar](#)
- [4] Plavin, A., et al. "FRB 121102: drastic changes in the burst polarization contrasts with the stability of the persistent emission." *Monthly Notices of the Royal Astronomical Society* 511.4 (2022): 6033-6041. [CSCD](#) [Google Scholar](#) [Baidu Scholar](#)
- [5] Yamasaki, Shotaro, Kazim Yavuz Eksi, and Ersin Gögüs. "Angular Dependence of Coherent Radio Emission from Magnetars with Multipolar Magnetic Fields." *Monthly Notices of the Royal Astronomical Society* (2022). [CSCD](#) [Google Scholar](#) [Baidu Scholar](#)

Distribution map



Key Takeaways

- Deposit research data on a data repository is the most effective way to share your data openly
- ScienceDB integrates multi-identifiers make research data more connective and more easily discoverable
- Not only research data but all the resource entities require identifier

THANK YOU

<https://www.scidb.cn/>
<https://www.scidb.cn/en>
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