

# Common Science and Technology Resource Identifier



# Brief Introduction

CSTR, Common Science and Technology Resource Identifier , is one of the global PIDs, CSTR aims to promote establishing a global science and technology resource identification architecture, which is able to tracing the global influence, cross-disciplinary, cross-regional and cross-platform, to realize the rapid positioning and acquisition worldwide, and be used as the digital base for open science, contributed to the scientific research innovation.

# CSTR National Standard

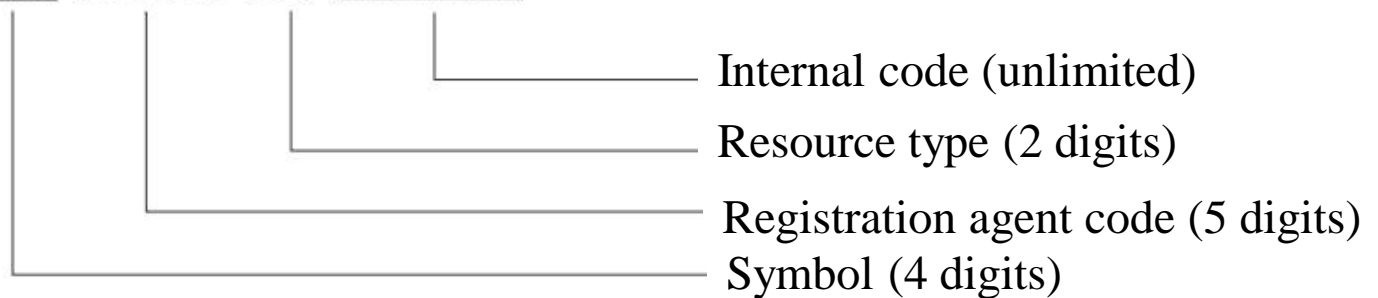


Common Science and Technology  
Resource Identifier

CSTR is the on the basis of the China National Standard 《GB/T32843-2016 Science and Technology Identification》, the identifier is composed of four parts.



CSTR: XXXXX. XX. XXX...XXX



◆ **example:**

**CSTR: 31253.11.sciencedb.01531:**

- “31253” the RA code for ScienceDB,
- “11” the type is scientific data,
- “sciencedb.01531” internal code,
- “sciencedb” name of the RA,

《GB/T32843-2016 Science and Technology  
Identification》

# CSTR IANA Standard



Common Science and Technology  
Resource Identifier



IANA (The Internet Assigned Numbers Authority), “Uniform Resource Identifier (URI) Schemes” <https://www.iana.org/assignments/uri-schemes/uri-schemes.xhtml>

com-eventbrite-attendee	<a href="#">prov/com-eventbrite-attendee</a>	com-eventbrite-attendee
content	<a href="#">prov/content</a>	content
content-type	<a href="#">prov/content-type</a>	content-type
crid		TV-Anytime Content Reference Identifier
<b>cstr</b>	<a href="#">prov/cstr</a>	<b>cstr</b>
cvs	<a href="#">prov/cvs</a>	cvs
dab	<a href="#">prov/dab</a>	dab
dat	<a href="#">prov/dat</a>	dat
data		data
dav		dav
diaspora	<a href="#">prov/diaspora</a>	diaspora
dict		dictionary service protocol
did	<a href="#">prov/did</a>	did
dis	<a href="#">prov/dis</a>	dis
dlina-playcontainer	<a href="#">prov/dlina-playcontainer</a>	dlina-playcontainer
dlina-playsingle	<a href="#">prov/dlina-playsingle</a>	dlina-playsingle
dns		Domain Name System
dntp	<a href="#">prov/dntp</a>	dntp
<b>doi</b>	<a href="#">prov/doi</a>	<b>doi</b>
dpp	<a href="#">prov/dpp</a>	dpp

## Uniform Resource Identifier (URI) Schemes

Last Updated  
2022-07-06

Available Formats



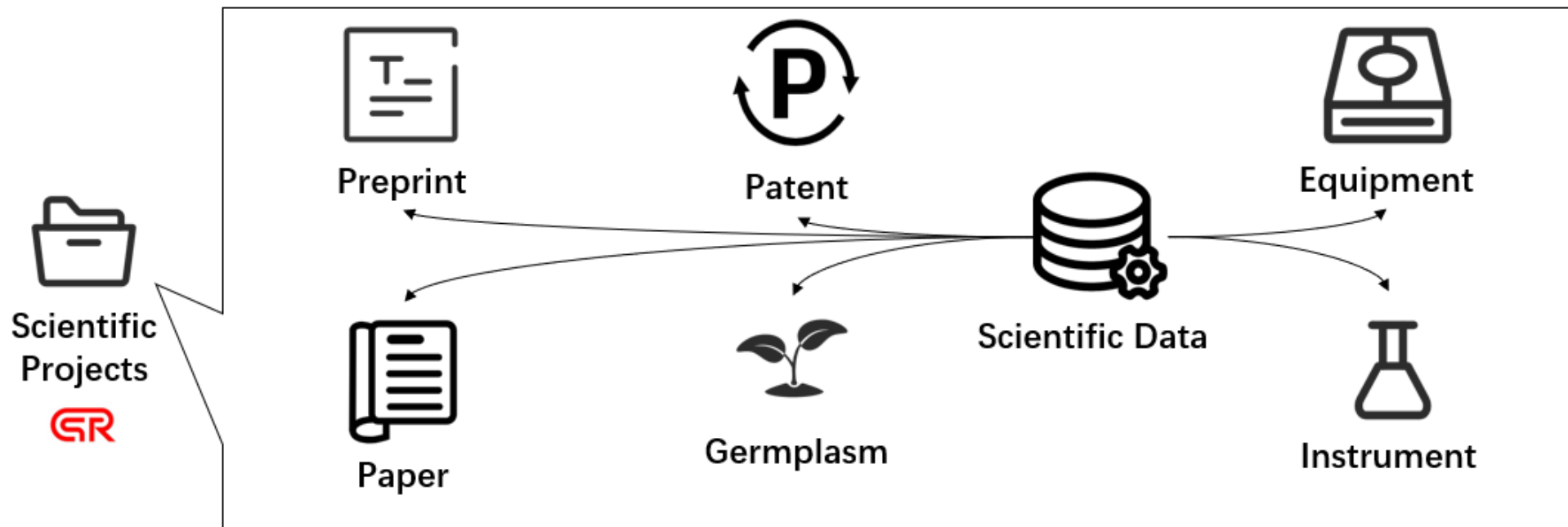
Registry included below

- [Uniform Resource Identifier \(URI\) Schemes](#)

**CSTR is for various scientific and technology resources**

type code

CSTR: XXXXX. **XX.** XXX...XXX



# CSTR is one of the Global PIDs

## The basic information infrastructure for Open Science



**Registration  
Service**

**More  
discoverable  
and accessible**



**Resolution  
Service**

**Distributed and  
more Convenient**



**Associated  
Services**

**Linking all kinds  
of resources**

# The Value



# Members



Common Science and Technology  
Resource Identifier

Members **184**

Resource type **8**



国家干细胞资源库  
NATIONAL STEM CELL  
RESOURCE CENTER



国家基础学科公共科学数据中心



国家生态科学数据中心  
National Ecosystem Science Data Center



中国科学院生态环境研究中心  
Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences



国家海洋科学数据中心  
National Marine Data Center



国家微生物科学数据中心  
National Microbiology Data Center



National  
Wild Seed  
Resource Center  
国家重要野生  
植物种质资源库



国家地球系统科学数据中心  
National Earth System Science Data Center



国家高能物理科学数据中心  
National HEP Data Center



CSData  
中国科学数据



Science Data Bank  
科学数据银行



植物科学数据中心  
Plant Science Data Center



TPDC 国家青藏高原科学数据中心



中国科学技术大学  
University of Science and Technology of China



NADC National Astronomical Data Center  
国家天文科学数据中心



中国科学院动物研究所  
INSTITUTE OF ZOOLOGY, CHINESE ACADEMY OF SCIENCES



国家地球系统科学数据中心  
National Earth System Science Data Center



中国科学院 南京地理与湖泊研  
NANJING INSTITUTE OF GEOGRAPHY & LIMNOLOGY, CHINESE ACADEMY OF



科学数据中心  
Scientific Data Center of CAS



国家动物标本资源库  
National Animal Collection Resource Center



数据与计算发展前沿  
Frontiers of Data & Computing

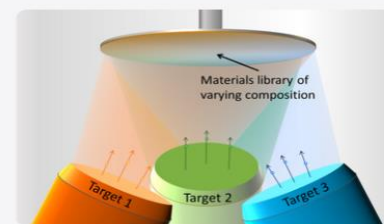


# Use Cases1

CSTR Provide identification service for Scientific Data Center of CAS.

- Published dataset
- Linked with projects
- Evaluating indicator

## Scientific Data Center of CAS



### 非晶合金数据库

CSTR: 32321.11.BB11E530A4C64CCA8D197E2CEFE1B52

发布数据中心: 中国科学院凝聚态物质科学数据中心

提交机构:

简介: 高通量实验技术研发、非晶合金新材料的高通量探索、非晶合金得非晶合金形成成分范围的效率大大提高。以三元合金体系为例, 通过



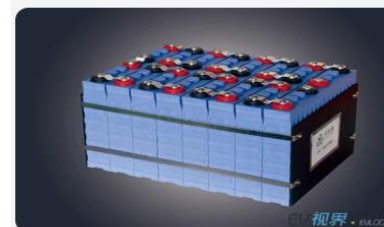
### 晶体材料拓扑性质数据库

CSTR: 32321.11.82DDCE986DCF487BA31ACD32F5331DF9

发布数据中心: 中国科学院凝聚态物质科学数据中心

提交机构:

简介: 世界上首个拓扑材料数据库, 设计了一套计算具有时间反演对称类信息。建立了拓扑材料数据库网站, 提供了友好的界面交互功能。只



### 电池材料离子运输数据库

CSTR: 32321.11.23C93BD21951438F980C18038DEE458

发布数据中心: 中国科学院凝聚态物质科学数据中心

提交机构:

简介: 电池材料离子运输数据库包含了采用键价方法计算得到的21204535种、含Na的化合物4344种、含K的化合物2808种、含Mg的化

# Use Cases2




Common Science and Technology  
Resource Identifier

CSTR Provide identification service for Patent Center of CAS.

- Published patent
- Linked with the patent identifier
- Tracing the Citation
- Original text access

 Common Science and Technology  
Resource Identifier

## Basic Information

Invention Title: 一种快速筛选抗寄生虫活性化合物的方法 

 CSTR:32117.16.20220101.CN202210000231.7

Application No.: CN202210000231.7

Application Date: 2022-01-01

Publication No.: CN114384180A

Publication Date: 2022-04-22

Applicant: 中国科学院武汉植物园

Inventor: 郭明全,范民霞,陈桂林

**Abstract:** 本发明实施例公开了一种快速筛选抗寄生虫活性化合物的方法, 将乙酰胆碱酯酶和作用, 采用超滤离心后的溶液进行色谱-质谱分析, 得到楝科植物与乙酰胆碱酯酶、乳酸结合度, 即为抗寄生虫的活性化合物; 本发明实施例的方法筛选活性化合物灵敏度高、准确

 CASIP  
中国科学院知识产权网

首页 新闻 数据库 系统 集成信息  
WWW.CASIP.AC.CN 院内新闻 院外新闻 数据检索 分类浏览 在线培训 专利分析 文献信息 法律法规 资源导航

专利名称 --- 【一种快速筛选抗寄生虫活性化合物的方法】 [全文链接一](#) [全文链接二](#) 

### 基本信息

申请号	CN202210000231.7	申请日	20220101
公开(公告)号	CN114384180A	公开(公告)日	20220422
科技资源标识	 CSTR:32117.16.20220101.CN202210000231.7		
申请(专利权)人	中国科学院武汉植物园		
申请人地址	430074 湖北省武汉市东湖新技术开发区九峰一路201号		
发明人	郭明全;范民霞;陈桂林	专利类型	发明专利

本发明实施例公开了一种快速筛选抗寄生虫活性化合物的方法, 将乙酰胆碱酯酶、乳酸脱氢酶与楝科植物前

# Use Cases3



Common Science and Technology  
Resource Identifier

CSTR Provide identification service for different resources, different institutions, and different projects.

- Tracing citations and data analysis
- Linked resource

## Papers

SciEngine  
科学通报  
氨气新用途: 不对称合成手性α-氨基酸  
CSTR: 32002.14.TB-2022-0596

数据与计算发展前沿  
Frontiers of Data & Computing  
The Estimation of Satellite Phase Bias Based on Uncombined Precise Point Positioning Ambiguity Resolution  
CSTR: 32002.14.Jfdc.CN10-1649/TP.2022.04.001

## Preprint

中国科学院科技论文预发布平台  
2542312 16493 2558805 56395306 16360122  
论文总量 ChinaXiv论文量 全球预印本论文量 论文访问量 论文下载量

自伤行为的神经生理机制及共病障碍比较  
Neural mechanism of NSSI and comparative study with comorbidities  
作者: 邓琦(1); 陈宇(1); 王单单(1); 赵欢欢(1); 贺斐(1);  
作者单位: 1.上海师范大学;  
发表时间: 2021-12-31

摘要: 自伤行为是危害公众心理健康的重大隐患。综合自伤行为的新近研究成果、情绪脑区、控制脑区、疼痛脑区、奖赏脑区、阿片类系统和多巴胺系统以及特定基因的异常共同参与自伤行为。将自伤行为与自杀、成瘾、进食障碍和抑郁障碍进行比较,发现自伤行为与其共病障碍存在部分相似的发生机制。在此基础上尝试构建了自伤行为的认知神经机制假设模型,并就自伤行为神经生理机制的性别差异、发展特点及干预提出研究展望。

英文摘要: Non-suicide self-injury (NSSI) is a major mental disorder which may lead to severe damages to one's body and mind. Previous studies showed that emotion, control, pain, reward and endogenous opioids systems together with some genetic shortages contributed to the neural mechanism of NSSI. Meanwhile, NSSI had some partially overlapping mechanism compared with suicide, addiction, eating disorders and depression disorders. We therefore built a model which explained the cognitive process combining with neural mechanism of NSSI. Further research may put more attention on longitude studies, gender differences and treatment of NSSI.

非自杀性自伤 神经生理机制 共病障碍

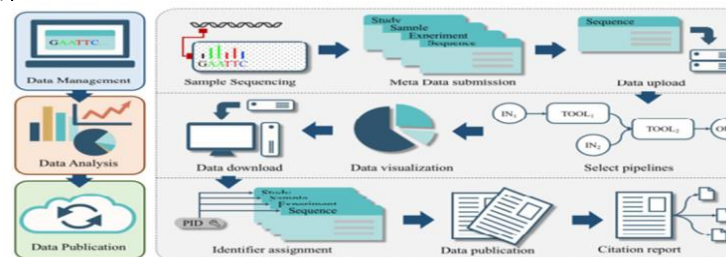
来自: 邓琦  
期刊: 心理科学进展  
分类: 心理学 >> 心理学其他学科  
引用: chinaXiv:202201.00001 (或此版本 chinaXiv:202201.00001V1)

(doi:10.12074/202201.00001)  
(cstr:32003.36.202201.00001.V1)  
推荐引用方式: 邓琦,陈宇,王单单,赵欢欢,贺斐.(2021).自伤行为的神经生理机制及共病障碍比较.心理科学进展.[ChinaXiv:202201.00001] (复制)

## Scientific data

黑河综合遥感联合试验: 临泽草地加密观测区样方样带布置数据集  
发布时间:2019/12/31 10:52 点击量: 501 申请量: 2  
中文名称: 黑河综合遥感联合试验: 临泽草地加密观测区样方样带布置数据集 (2008年)  
英文名称: Heihe River Integrated Remote Sensing joint experiment: data set of quadrat and transect layout in Linze grassland intensive observation area (2008)  
DOI: 10.12072/ncdc.NIEER.db1912.2022  
CSTR: CSTR:11738.11.ncdc.NIEER.2021.1713  
数据共享方式: 在线下载  
数据分类: 遥感及产品

关键词: scanning tunneling microscopy, superlattice, charge transfer  
作者: Song Can-Li;Sun Bo;Wang Yi-Lin;Jiang Ye-Ping;Wang Lili;He Ke;Chen Xi;Zhang Ping;Ma Xu-Cu...  
发布日期: 2012  
CSTR:50007.14.PHYSREVLETT.108.156803  
44 3 SEMANTIC SCHOLAR 42 Crossref 45 Google Scholar 55



## Institutions

Fostering Adaptive Expertise to Increase Retention and Graduation of Lc  
Date:2022-06-01 ~ 2028-05-31  
Country: United States  
Award Type: Standard Grant  
NSF Org: Direct For Education and Human Resources  
Abstract: This project will contribute to the national need for well-educated scientists, monstrated financial need at Stevens Institute of Technology. Over its six-year duratic  
CSTR:73628.40.NSF.2130428

基础信息  
机构名称: Philadelphia History Museum  
CSTR:60002.34.0134  
机构类型: Archive  
成立日期: 1938  
国家: 美国  
其他标识  
官网: http://www.philadelphiahistory.org/  
Wikipedia: https://en.wikipedia.org/wiki/Philadelphia\_History\_Museum

Precipitationshed Approach to Changing Extremes

Abbreviation: PACE Status: SIGNED Country: Netherlands

Date: 2022-11-15 ~ 2024-11-14

Objective: Characterizing the frequency of future precipitation extremes is a nging task as intense rainfall is poorly represented in climate models, and ex

CSTR:72594.40.EU.101025217

12 1

## CSTR help the smart agriculture




智慧农业种植管理系统V1.0

冷雨夜 退出

现在位置: 农场列表 > 农场首页 > 试验大棚01 > 地块1

实时数据 历史数据 田间记录

实时视频 每20秒自动刷新



02-22-2016 星期一 16:19:24

Camera 01

地块信息

作物名称: 菜心 地块编码: 10001-20150001 面积: 100 m<sup>2</sup>  
种植状态: 种植中

传感监控信息

空气 温度: 13.51 °C 湿度: 98.22 %  
土壤 温度: 23.97 °C 湿度: 3.84 %  
光照 2130.64 LUX

二氧化碳 CO<sub>2</sub> 415.41 ppm

设备控制区

风机(作业中) 温槽(已关闭) 喷雾(作业中) 卷帘(已关闭) 灌溉(作业中) 自动调控

今日数据

二氧化碳浓度图 光照强度图

The CSTR is used as the unique identifier by this smart farmland,:

- Agriculture instruments
- plants
- Farmland
- people
- Linking the published meteorological information

## CSTR help the smart agriculture



1号地块-地块数据

实时数据 历史记录 田间数据

实时视频  
地块编码: 20150001 面积: 100m<sup>2</sup> 27秒后自动刷新

<p>空气</p> <p>温度 13.8°C 湿度 97.9%</p>	<p>土壤</p> <p>温度 24.8°C 湿度 11.5%</p>
<p>光照</p> <p>4060.080LUX</p>	<p>CO<sub>2</sub></p> <p>二氧化碳 454.79ppm</p>

Real-time data



1号地块-地块数据

实时数据 历史记录 田间数据

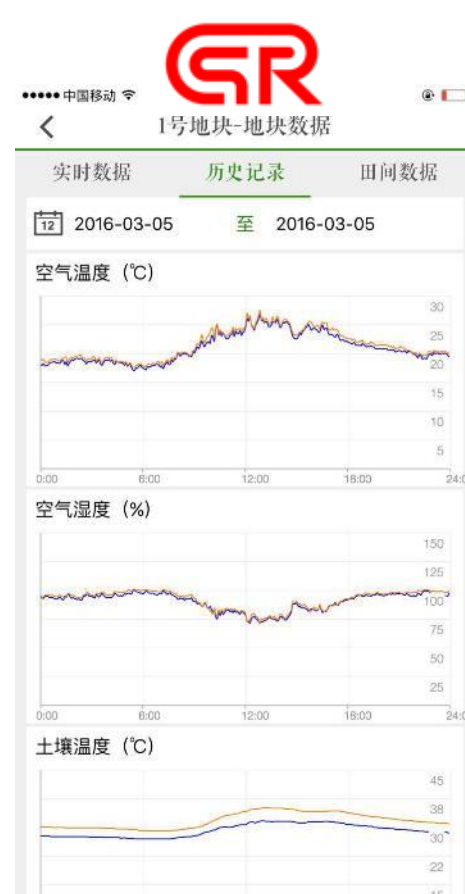
<p>空气</p> <p>温度 13.8°C 湿度 97.9%</p>	<p>土壤</p> <p>温度 24.8°C 湿度 11.5%</p>
<p>光照</p> <p>4060.080LUX</p>	<p>CO<sub>2</sub></p> <p>二氧化碳 454.79ppm</p>

设备控制

风机
  加温灯
  喷灌
  遮阳
  滴管

自动灌溉调控设定

Instruments -control



1号地块-地块数据

实时数据 历史记录 田间数据

2016-03-05 至 2016-03-05

空气温度 (°C)

空气湿度 (%)

土壤温度 (°C)

data record



1号地块-地块数据

实时数据 历史记录 田间数据

产源信息

产品产地: 广东广州花都区  
地块编码: 10001-20150001  
种植面积: 100 m<sup>2</sup>  
种植批次: 20160218

作物履历

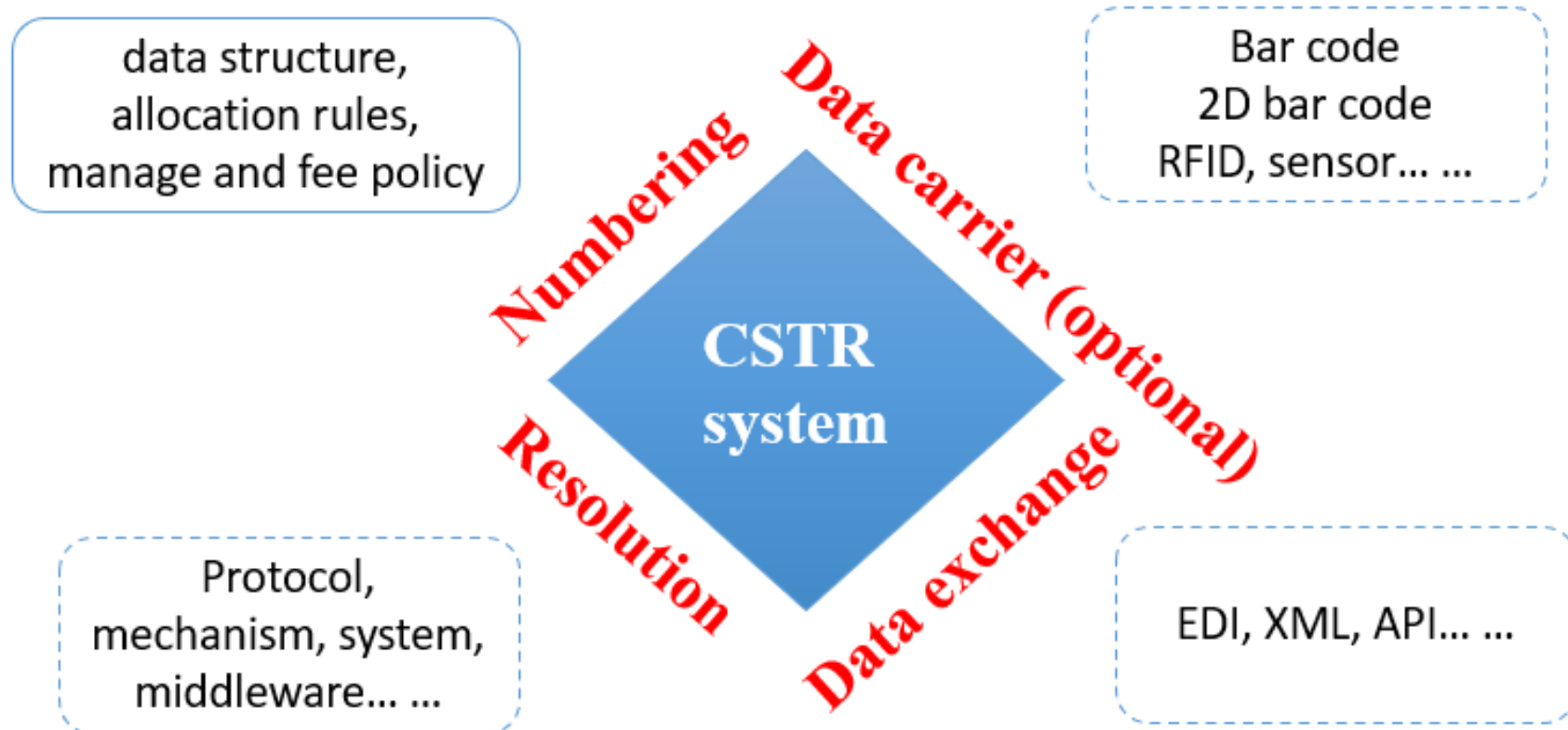
种植	2016-01-01 10:51
负责人: 张三	种植数量: 500
施肥	2016-01-28 09:10
负责人: 张三	肥料: 硝酸铵120g
施药	2016-02-04 15:08
负责人: 张三	农药: 必利得2mL
虫害: 跳甲	位置: 根茎
间隔期: 2天	浓度: 12mL/L
施肥	2016-02-18 11:35
负责人: 张三	肥料: 氮肥120g

Field data

# CSTR Standards Architecture



Common Science and Technology  
Resource Identifier



CSTR is not only for the digital things but also for physical items.

The CSTR system consist four parts which work together to support the whole CSTR service

- Numbering
- Data carrier
- Resolution
- Data exchange

# Service and Cooperation

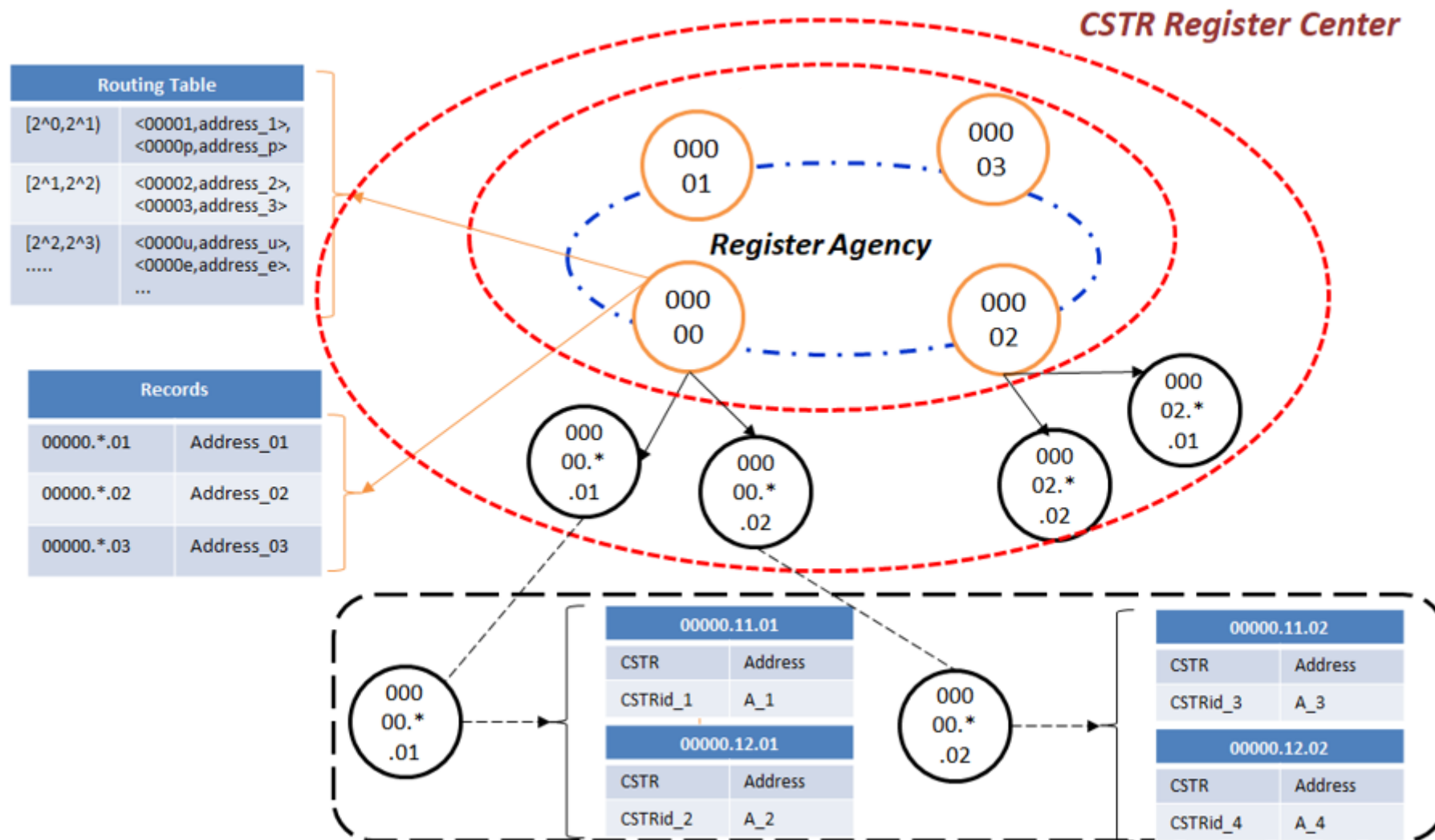


# CSTR is an distributed community



Common Science and Technology  
Resource Identifier

The CSTR architecture is decentralized, each RA is one node of the CSTR data network, each RA manage their own CSTR system, the data is localized in RA.



# Service-CSTR citation tracing box



Common Science and Technology  
Resource Identifier



CSTR citation tracing box is based on the CSTR identifier, integrated with Crossref, Google Scholar services, aims to promote the CSTR citation tracing ability.

# Service-CSTR resolution monitor



Common Science and Technology  
Resource Identifier

CSTR resolution service provide the monthly data report, help the data centers to promote the information service.

**Total monitor: 472,426**

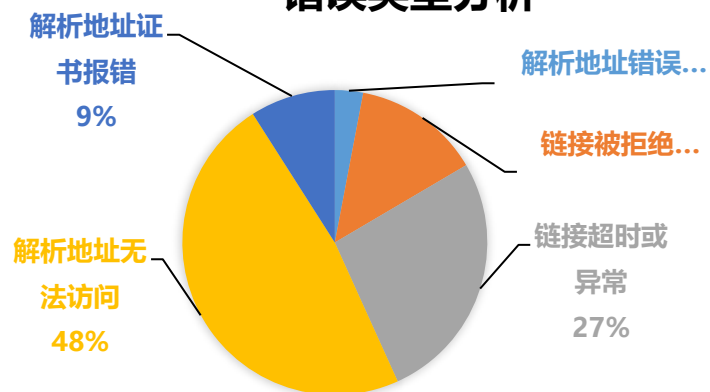
**qualified: 469,317**

**Non-qualified: 3109**

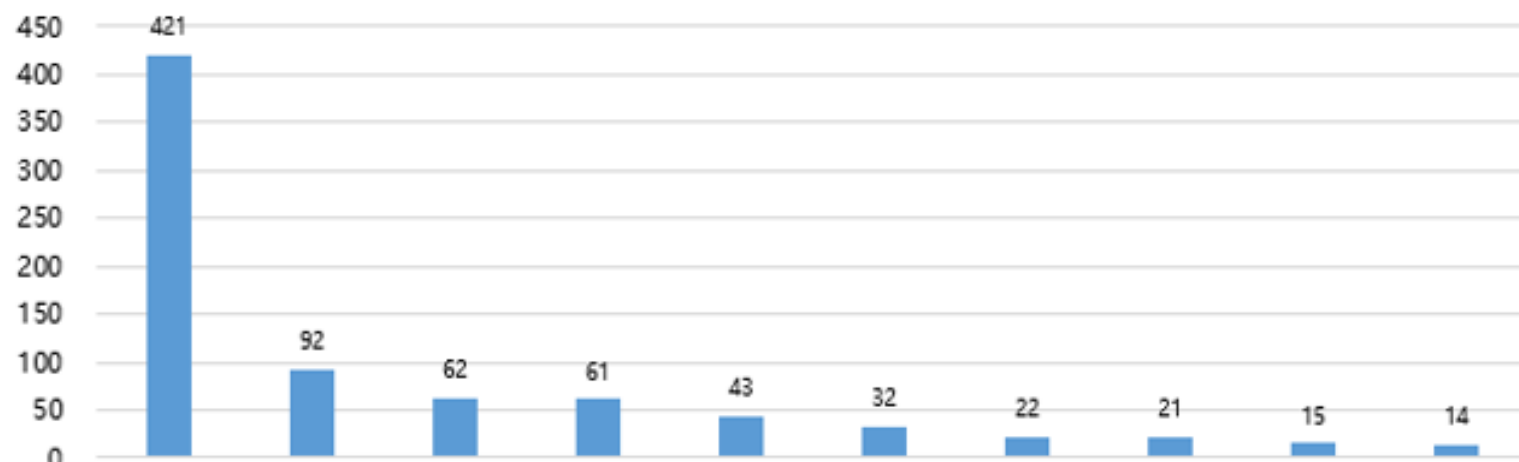
数据中心数量	注册总量	不合格标识数	占比
40	434,086	840	0.19%

本次共计检查40个数据中心，434,706条标识数据，其中不通过量为841，占比0.19%。

## 错误类型分析



## 不通过标识数机构TOP10



# Cooperations



Common Science and Technology  
Resource Identifier



Common Science and Technology  
Resource Identifier

ORCID



ROR



Handle.Net



arXiv identifier



ISBN



URI

## CSTR is adopted by Harvard data center



### Feature Request/Idea: Add CSTR to Harvard Dataverse Related Publication ID Type list #8838

New issue

Open jggautier opened this issue 9 hours ago · 0 comments



jggautier commented 9 hours ago · edited

Contributor

#### Overview of the Feature Request

**What kind of user is the feature intended for?**  
(Example users roles: API User, Curator, Depositor, Guest, Superuser, Sysadmin)  
Curator, Depositor

**What inspired the request?**  
Xiaolei Xia from the Computer Network Information Center, the Chinese Academy of Sciences, emailed Dataverse support requesting that the resource identifier called CSRT (<https://www.cstr.cn/search/specification>) be added to the list of ID types in the Related Publication metadata field's ID type field. That way depositors publishing datasets in Dataverse repositories can add a related publication that as this type of identifier.

**What existing behavior do you want changed?**  
Add CSTR to the list of ID types in the Related Publication metadata field's ID Type field. The CSTR ID will also have to be included in several metadata exports that already include what depositors enter in the ID Type and ID Number fields: DDI, DC Terms, and OpenAIRE.

**Any related open or closed issues to this feature request?**  
None that I can think of.

#### Assignees

No one assigned

#### Labels

Feature: Metadata

#### Projects

None yet

#### Milestone

No milestone

#### Development

No branches or pull requests

#### Notifications

Customize

Subscribe

You're not receiving notifications from this thread.

jggautier added the Feature: Metadata label 9 hours ago

## CSTR is adopted by FAO

Food and Agriculture Organization of the United Nations, FAO, The Global Information System for PGRFA datacenter  
<https://glistest.planttreaty.org/glis/entity/view?eid=21737>



[Home](#) [Statistics](#) [DOI module](#) [Partners](#) [Login](#) [English](#) ▾



### Ex situ PGRFA doi:10.0155/N7FR

Why is this DOI red?

Citation: <https://doi.org/10.0155/N7FR>

Main descriptors

DOI info

**Organization/individual conserving the PGRFA** CSTR Test  
China  
Easy-SMTA PID: 00AX60 [Details]

**Local identifier** CSTR-1

**Date** 2022-05-31

**Creation method** Acquisition

**Taxon** Triticum aestivum

**Common name** Wheat

**Biological status**

**Names**

**Other identifiers**

**MLS status**

**Historical**

CSTR 12165.04.1599207688593117507

## CSTR is adopted by ORCID

ORCID (Open Researcher and Contributor ID) <https://pub.orcid.org/v3.0/identifiers>

### ORCID identifier types

Name	Description	Resolution Prefix	Case sensitive	Primary use
agr	agr: Agricola		false	work
ark	ark: Archival Resource Key Identifier		true	work
arxiv	arxiv: ArXiv	<a href="https://arxiv.org/abs/">https://arxiv.org/abs/</a>	false	work
asin	asin: Amazon Standard Identification Number	<a href="http://www.amazon.com/dp/">http://www.amazon.com/dp/</a>	false	work
asin-tld	asin-tld: ASIN top-level domain		false	work
authenticusid	authenticusid: AuthenticusID	<a href="https://www.authenticus.pt/">https://www.authenticus.pt/</a>	false	work
bibcode	Bibcode	<a href="http://adsabs.harvard.edu/abs/">http://adsabs.harvard.edu/abs/</a>	true	work
cba	cba: Chinese Biological Abstracts		false	work
cienciaiul	cienciaiul: Ciência-IUL Identifier	<a href="https://ciencia.iscte-iul.pt/id/">https://ciencia.iscte-iul.pt/id/</a>	false	work
cit	cit: CiteSeer		false	work
cstr	cstr: Science and technology resource identification	<a href="https://www.cstr.cn/">https://www.cstr.cn/</a>	false	work
ctx	ctx: CiteExplore submission		false	work
dnb	dnb: German National Library identifier	<a href="https://d-nb.info/">https://d-nb.info/</a>	false	work
doi	doi: Digital object identifier	<a href="https://doi.org/">https://doi.org/</a>	false	work
eid	Scopus Identifier		false	work



国际组织采纳



# Cooperations



Common Science and Technology  
Resource Identifier

## ePIC(Persistent identifier for eResearch)

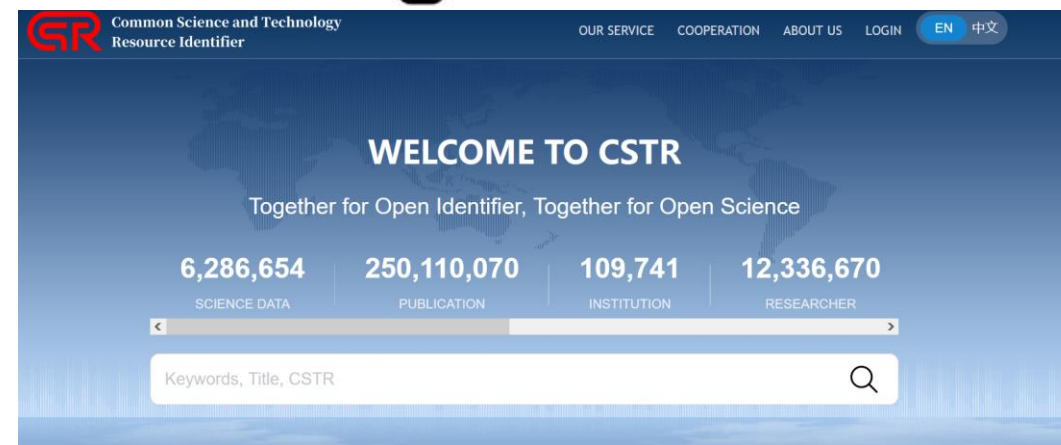
The consortium signed a Memorandum of Understanding aiming to provide long term reliability for the PID services. Meanwhile ePIC is an international consortium and open to partners from the research community worldwide.

## CNIC and ePIC sign the MoU

- Exclusive Agency of ePIC under prefix “21” in China.
- research on leading edge technology, such as the data type registry, FAIR DO, etc;
- provide scientific data identification cross-disciplinary

## Achievements

Based on the Handle service, CNIC developed the data identification service to support the eResearch in China also open to global research institutions.





# Cooperations



Common Science and Technology  
Resource Identifier

## Cooperation with C2CAMP

(Cross-Continental Collection & Management Pilot)

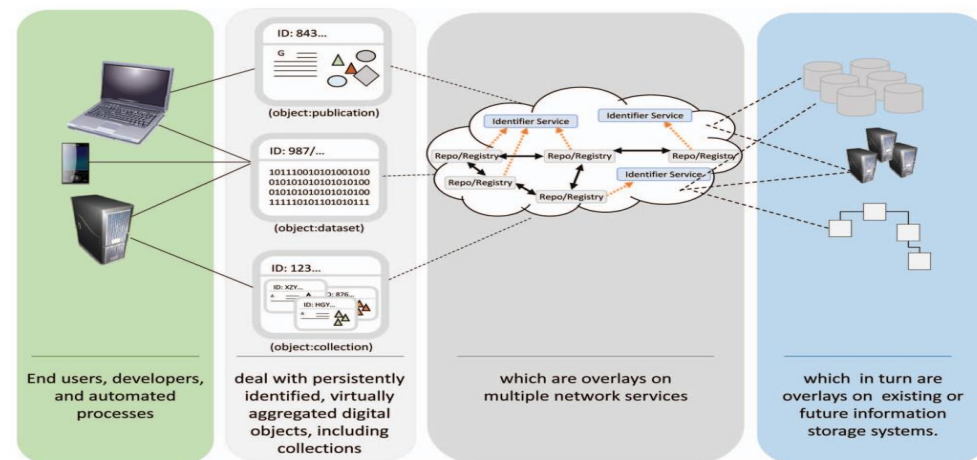
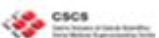
■ the first member from China;

■ DO-based Infrastructure

Testbed

■ participate the development of the **DOAP**

(Digital Object Access protocol)



GDOC (Global Digital Object Cloud)



## Cooperation with ISLI China

(International standard link identifier registration authority)



- strategic cooperation agreement
- metadata relevance
- **innovation: Knowledge Service**
- interworking between the CSTR platform and ISLI service platform
- specific use case and promotion of the standards

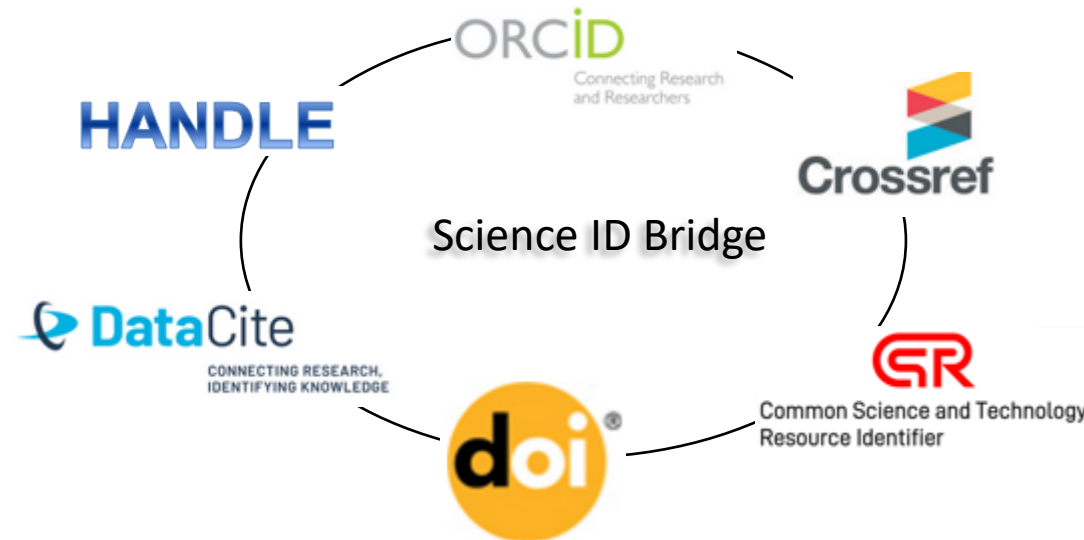
# The Prospect

# ID Bridge

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## Initial the “Global Science ID Bridge Plan”

Let’s build an “ID Bridge ” to range between the heterogeneous identification systems to make better FAIR principle for the Open Science



# Thank you

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