



WorldFAIR

# Geochemistry Inter Domain Interoperability

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AuScope and OneGeochemistry

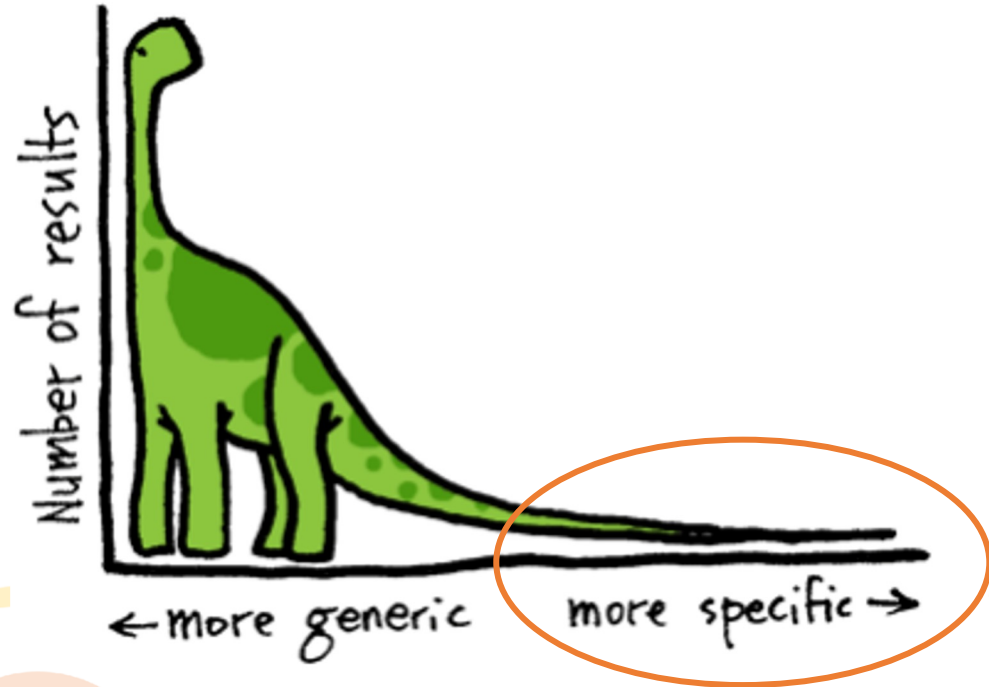
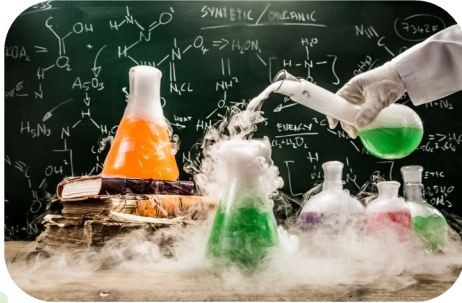


AuScope



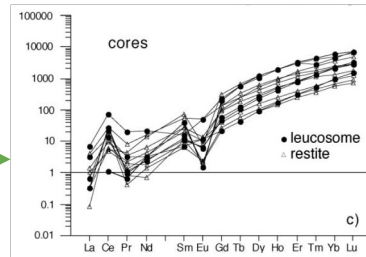
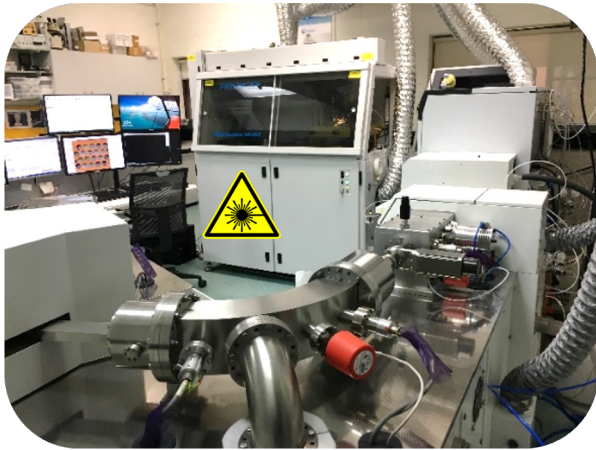
# The Geochemistry Domain or Discipline

A 'Long Tail' community with many subdisciplines, highly specific and small size datasets

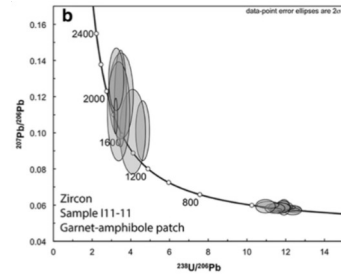


# Sub-disciplines

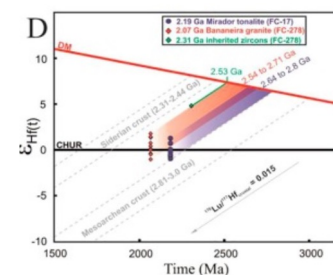
A 'Long Tail' community with many subdisciplines, highly specific and small size datasets



Trace elements



Uranium and lead isotopes

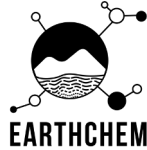


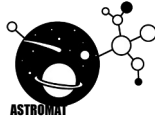

Lutetium and hafnium isotopes

# Large Data Collections and Repositories

{  figshare  
 zenodo }

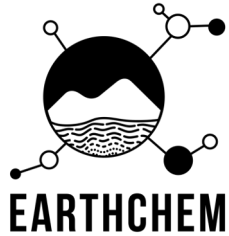
**Generalists**



{  ASTROMAT  
 MetBase }

**Specialists**

# FAIR Repositories?



# FAIR principles and FIPs (questionnaire)



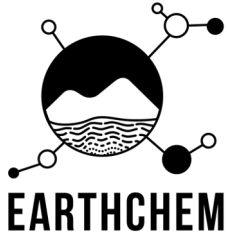
FAIR principle	Question	FAIR enabling resource types
F1	What globally unique, persistent, resolvable identifiers do you use for metadata records?	Identifier type
F1	What globally unique, persistent, resolvable identifiers do you use for datasets?	Identifier type
F2	Which metadata schemas do you use for findability?	Metadata schema
F3	What is the technology that links the persistent identifiers of your data to the metadata description?	Metadata-Data linking mechanism
F4	In which search engines are your metadata records indexed?	Search engines
F4	In which search engines are your datasets indexed?	Search engines
A1.1	Which standardized communication protocol do you use for metadata records?	Communication protocol
A1.1	Which standardized communication protocol do you use for datasets?	Communication protocol
A1.2	Which authentication & authorisation technique do you use for metadata records?	Authentication & authorisation technique
A1.2	Which authentication & authorisation technique do you use for datasets?	Authentication & authorisation technique
A2	Which metadata longevity plan do you use?	Metadata longevity
I1	Which knowledge representation languages (allowing machine interoperability) do you use for metadata records?	Knowledge representation language
I1	Which knowledge representation languages (allowing machine interoperability) do you use for datasets?	Knowledge representation language
I2	Which structured vocabularies do you use to annotate your metadata records?	Structured vocabularies
I2	Which structured vocabularies do you use to encode your datasets?	Structured vocabularies
I3	Which models, schema(s) do you use for your metadata records?	Metadata schema
I3	Which models, schema(s) do you use for your datasets?	Data schema
R1.1	Which usage license do you use for your metadata records?	Data usage license
R1.1	Which usage license do you use for your datasets?	Data usage license
R1.2	Which metadata schemas do you use for describing the provenance of your metadata records?	Provenance model
R1.2	Which metadata schemas do you use for describing the provenance of your datasets?	Provenance model

FAIR = More than F. A. I. R.

FAIR Implementation Profile



# FAIR Enabling Resources



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FAIR principle	Question	Resource
F1	What globally unique, persistent identifiers do you use for your datasets?	Global Data Identifier
F2	Which metadata schemas do you use for your datasets?	Metadata schema
F3	What is the technology that links your datasets to their metadata records?	Metadata link
F4	In which search engines are your datasets indexed?	Search engine
A1.1	Which standardized communication protocols do you use for your datasets?	Communication protocol
A1.2	Which authentication & authorization techniques do you use for your datasets?	Authentication & authorization technique
A2	Which metadata longevity plans do you use for your datasets?	Metadata longevity plan
I1	Which knowledge representation languages (allowing machine interpretation) do you use for your metadata records?	Knowledge representation language
I2	Which knowledge representation languages (allowing machine interpretation) do you use for your datasets?	Knowledge representation language
I3	Which structured vocabularies do you use to encode your metadata records?	Structured vocabularies
I4	Which models, schema(s) do you use for your metadata records?	Metadata schema
I5	Which models, schema(s) do you use for your datasets?	Data schema
RL1	Which usage license do you use for your metadata records?	Data usage license
RL2	Which usage license do you use for your datasets?	Data usage license
PR1	Which metadata schemes do you use for describing the provenance of your metadata records?	Provenance model
PR2	Which metadata schemes do you use for describing the provenance of your datasets?	Provenance model

Which structured vocabularies do you use to annotate your metadata records?

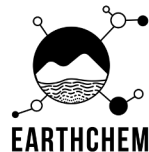
Which structured vocabularies do you use to encode your datasets?

Which models, schema(s) do you use for your metadata records?

Which models, schema(s) do you use for your datasets?

**FER = Structured Vocabulary (published)**

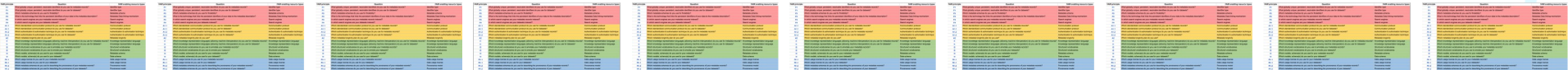
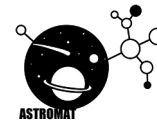
# FIPs for each will indicate needed FERs



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PANGAEA.



**Comparing FAIR Implementation Profiles will clarify where:**

- FAIR Enabling Resources are missing and need to be developed
- Crosswalks should be developed between existing FERs

**Publishing FAIR Implementation Profiles will:**

- Enable other (sub)disciplines to use and tailor to the FAIR Enabling Resource used by that discipline furthering cross domain interoperability.





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Thank you!

Questions?

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AuScope



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