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FAIR: findable needs identifiers. European Registry of Materials

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A long life cycle

- Nanomaterials are starting to be discussed during the experimental design (or equivalent)
- Reported on in the following documents:
  - Internal (WP) minutes
  - Experimental designs
  - Spreadsheets, data files
  - Internal reports
  - Public project deliverables
  - Deposited data sets, supplementary information
  - Journal articles (, preprints)
  - Policies, guidances

A long life cycle 2

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- LC(A?) of a nanomaterials
  - providers
  - batches
  - aging
  - …
- Different physchem|bio properties → different identifier
- New computational material?
  - Yes
  - But, same chemical composition?
- Track history of the material
  - ID1 → ID2 → ID3 → … → ID99

European Registry of Materials

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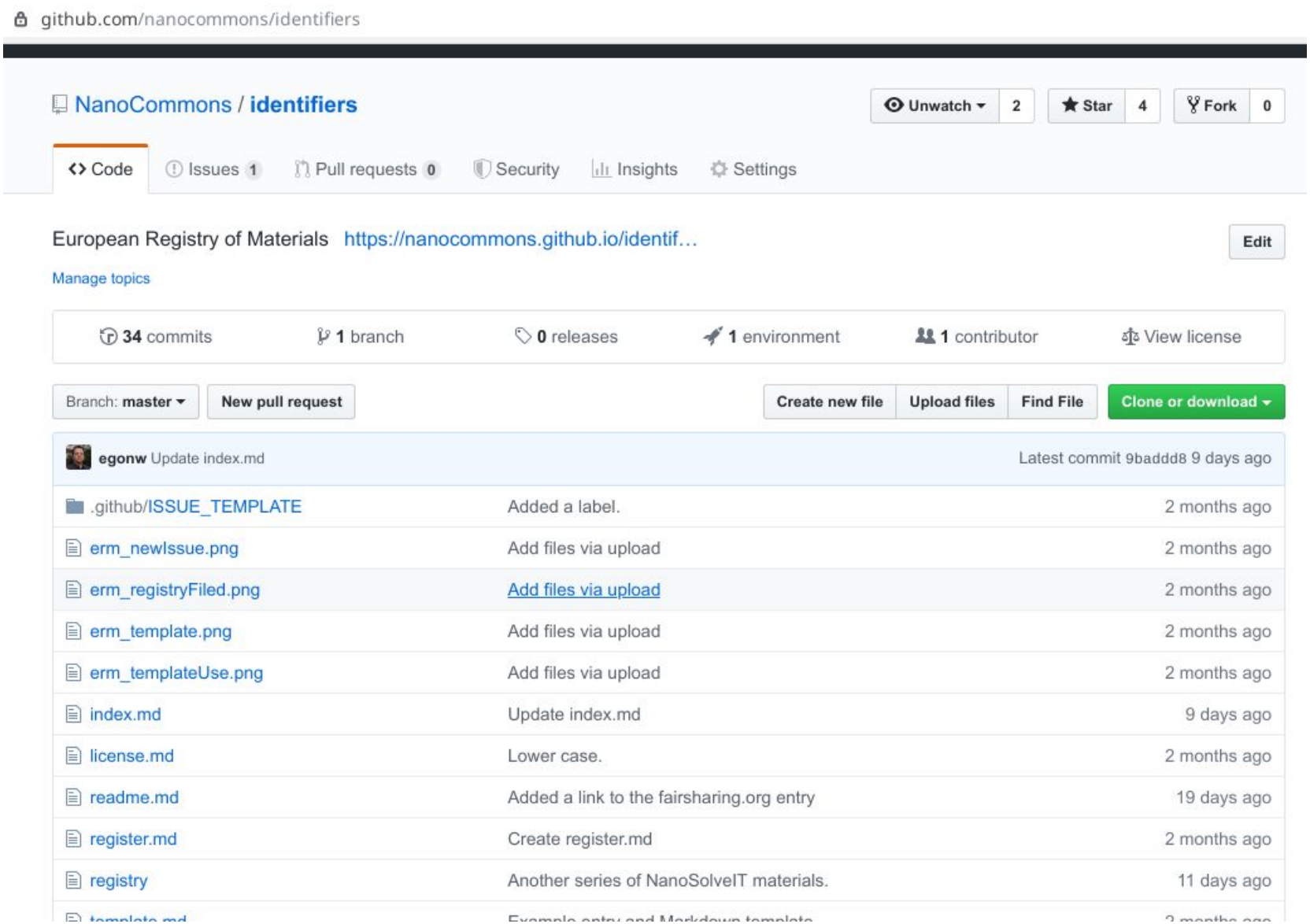

github.com/nanocommons/identifiers

NanoCommons / identifiers

Unwatch 2 | Star 4 | Fork 0

Code | Issues 1 | Pull requests 0 | Security | Insights | Settings

European Registry of Materials https://nanocommons.github.io/identif…

Edit

Manage topics

34 commits | 1 branch | 0 releases | 1 environment | 1 contributor | View license

Branch: master | New pull request | Create new file | Upload files | Find File | Clone or download

egonw Update index.md — Latest commit 9baddd8 9 days ago

.github/ISSUE_TEMPLATE	Added a label.	2 months ago
erm_newIssue.png	Add files via upload	2 months ago
erm_registryFiled.png	Add files via upload	2 months ago
erm_template.png	Add files via upload	2 months ago
erm_templateUse.png	Add files via upload	2 months ago
index.md	Update index.md	9 days ago
license.md	Lower case.	2 months ago
readme.md	Added a link to the fairsharing.org entry	19 days ago
register.md	Create register.md	2 months ago
registry	Another series of NanoSolveIT materials.	11 days ago
template.md	Example entry and Markdown template	2 months ago

What's in the registry?

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The associated information

To encourage wide adoption, the information that the registry will provide is kept to a minimum. This registry is not a database.

Required information

The only required information to provide during a registry is a name or label. This label can be anything. It can be a anonymized label, a descriptive label, or a more rich description. Importantly, the label itself has no meaning. Moreover, the label does not have to be unique.

Optional information

The following bits of information are welcome but not required (in random order):

- unique chemical composition
- batch and/or lot number
- an ontological classification (could be suggested based on the chemical composition?)
- a webpage
- a provider, contact, or project name

Keep in mind that provided data is provided to the registry under the CCZero license.

How to use the identifiers?

- As IRI
  - https://nanocommons.github.io/identifiers/registry#ERM00000001
- As a Compact Identifier [0]
  - erm:ERM00000001

0.https://www.nature.com/articles/sdata201829

Compact Identifier record

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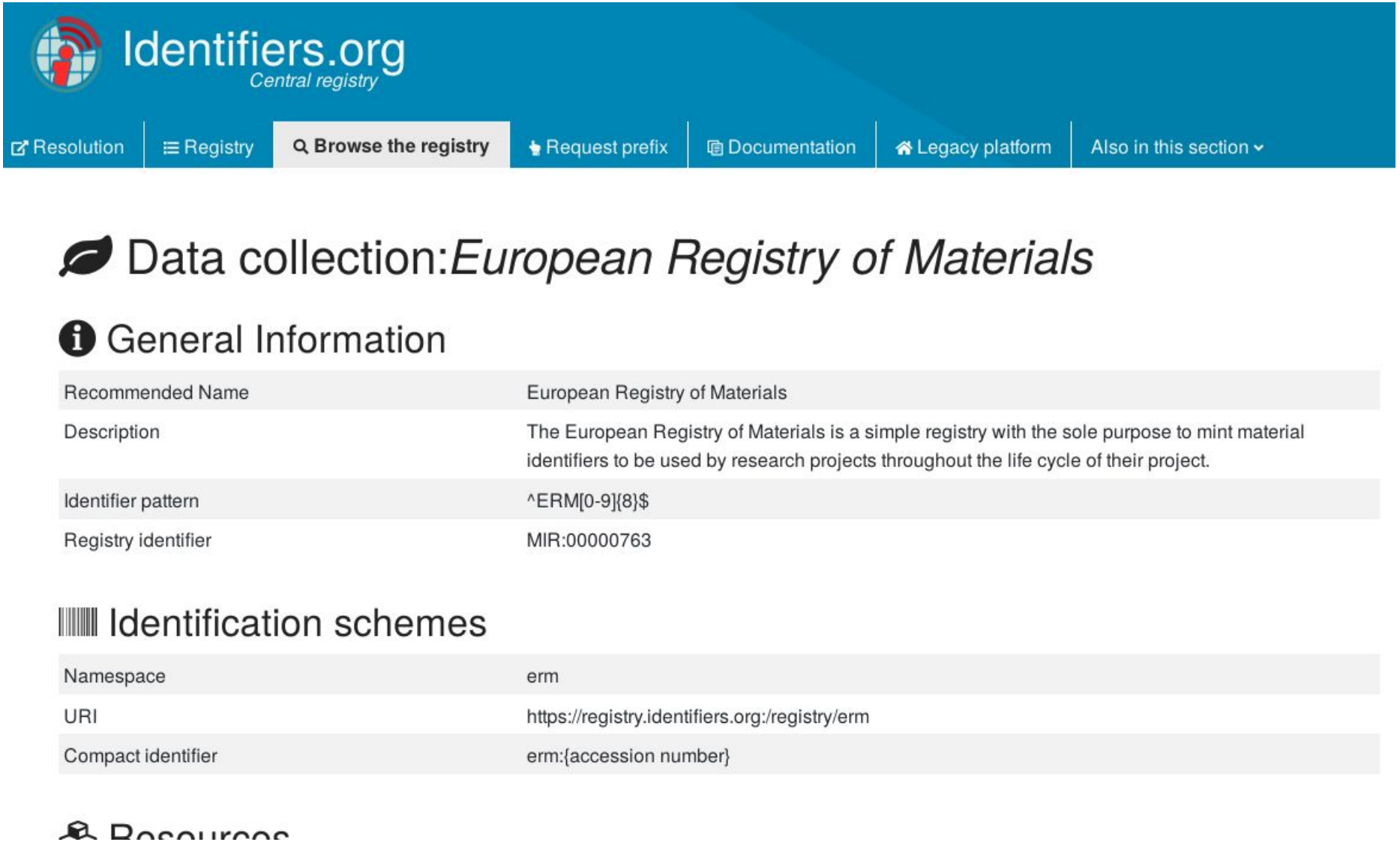


Registring new materials

How to register new materials

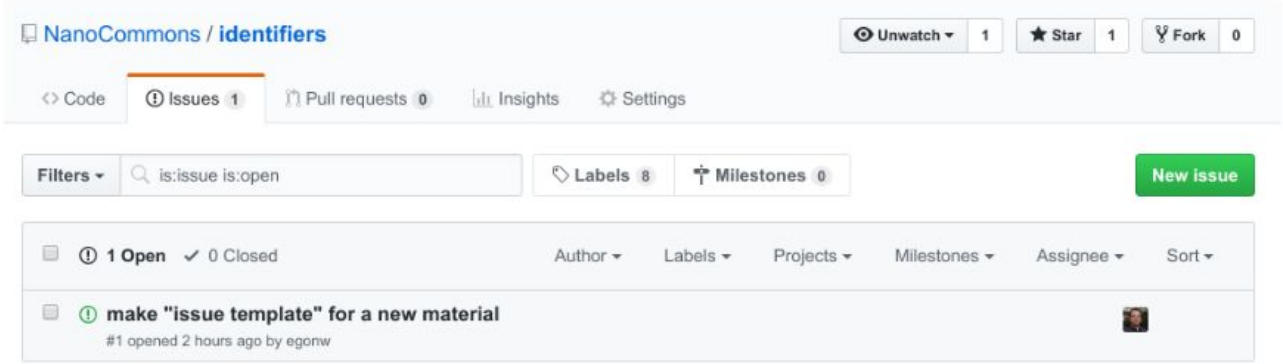
The following step explain how to register new materials. Mind you, for each material, please create a new issue.

Step 1. Aggregate the information

The first step is to aggregate the information you want to have associated with the newly minted identifier. There is required and optional information: only the name or label is required, and all other information is optional.

Step 2: Create a registry request

In the Issues section you can click the green **New issue** button:



You can then select the **Register Material** template by clicking the green **Get started** bytton:

You can then fill out the template using the information aggregated in Step 1. For example:

Issue: Register Material

A simple RDF format (Turtle)

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Branch: master ▾ identifiers / registry Find file Copy path

egonw Another series of NanoSolveIT materials. 9325ec4 11 days ago

1 contributor

64 lines (61 sloc) | 4.41 KB Raw Blame History

```
# format: turtle
@prefix erm: <https://nanocommons.github.io/identifiers/registry#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix obo: <http://purl.obolibrary.org/obo/> .

erm:ERM00000001 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 1" .
erm:ERM00000002 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 2" .
erm:ERM00000003 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 3" .
erm:ERM00000004 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 4" .
erm:ERM00000005 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 5" .
erm:ERM00000006 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 6" .
erm:ERM00000007 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 7" .
erm:ERM00000008 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 8" .
erm:ERM00000009 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 9" .
erm:ERM00000010 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 10" .
erm:ERM00000011 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 11" .
erm:ERM00000012 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 12" .
erm:ERM00000013 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 13" .
erm:ERM00000014 a obo:CHEBI_59999 ; rdfs:label "NanoSolveIT Material 14" .
```

Loose ends

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- Add a term in the CHEMINF ontology
  - Which will propagate into the eNanoMapper ontology
- Support in the database platforms
  - eNanoMapper db software (AMBIT)
  - BioMax platform
  - …
- Mention as identifier by Scientific Data
  - Already listed in fairsharing.org
- EU NSC Newsletter write up
  - (or maybe better: a OA article in some nano journal)
- First use in a public Deliverable or risk governance policy document :)

Hackathon

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- Mint identifiers
  - ACENano, NanoFASE, SmartNanoTox, eNanoMapper, NanoTest materials
- Model an example nanomaterial LC
  - (one NM, based on one of the above projects)
  - Write up as a basic “guidance” document
- Review current Deliverables and peer review for the use of these identifiers
  - Write up observations and needs (bullet point wise)