

FAIR Implementation Profiles: Chemistry

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I have had this on my todo list for way too long: writing about [FAIR Implementation Profiles](#), or FIPs for short (see also doi:[10.1007/978-3-030-65847-2_13](#)):

The FIP is a collection of FAIR implementation choices made by a community of practice for each of the FAIR Principles.

In the early GO FAIR days, people referred to the *challenges and choices*. FIPs are a formal approach to report the choices. The days of the *implementation networks*, like the Chemistry Implementation Network (doi:[10.1162/dint_a_00035](#)), or the AdvancedNano network (doi:[10.1016/j.impact.2024.100513](#)). For the first, we absolutely agreed on the InChI, for example, but we never wrote that down as a FIP. But even without FIPs, the idea was that communities could learn from each other, could converge. This is where the term [FAIR Convergence Matrix](#) comes from. (I had forgotten I was actually part of the matching Working Group. If only I had dedicated funding for it at the time.)

Now, I had on my wishlist to write up a list over FIPs around chemistry. This is relevant for the [FAIR4ChemNL](#) project, but obviously beyond that. And while we did a lot of FAIRification work in, particularly, the nanosafety cluster projects (eNanoMapper, NanoCommons, NanoSolveIT, RiskGONE, and SbD4Nano), a lot of this never was formalized as FIPs. Second, various relevant standards have been proposed in chemistry, for [chemical compounds](#) and [transformation products](#), among plenty of other things. But during the first [ELIXIR Toxicology Community](#) workshop in Utrecht, we had FIPs on the agenda too (see [this report](#)).

FIPs in Chemistry

But while I had already several browser tabs open for months, I never could find the courage to start making the list. Silly. Therefore, this list should be considered a start. I don't think it is exhaustive. I know there is an index somewhere, but I cannot find back that browser tab. Additions are most welcome: I will update this post (thanks to git and Rogue Scholar). In brackets I list (a selection of) the FAIR enabling resources mentioned in that FIP.

- [Adverse Outcome Pathways FIP](#) (DOI, AOP Wiki ID)
- [Toxicogenomics](#) (ISA-Tab, BioStudies, ArrayExpress)
- [WorldFAIR WP04 NANOMATERIALS FIP01](#) (DOI, ORCID, UUID, ROR, InChI, DataCite, QMRF, RDF/JSON-LD, OWL; doi:[10.5281/zenodo.7378109](#))

Is that all? No, I do not think so, but this is all I can easily find (ironically). Well, I guess you now see why I have had a so much trouble starting to write down this post... Someone will surely give me some pointers...

Acknowledgments

I also like to thank all the people involved in these FIPs. I strongly encourage you to look up all the people who wrote them down. I also like to thank the INTOXICOM workshop FIP experts Iseult Lynch and Gerhard Burger for sharing their knowledge.

chem-bla-ics

Finally, I recommend checking out the [FIP Wizard](#).