



NanoCommons

Nano-Knowledge Community



Tassos Papadiamantis, UoB

***Online Electronic Lab Notebook (ELN) basics Hackathon -
Getting into using ELNs for experimental and computational
workflows***

NanoCommons Workshop, 2020-07-14, #nanocommons

***This project has received funding from the European Union Horizon 2020
Programma (H2020) under grant agreement no. 731032.***

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Welcome



Working Group A

Communication, Training & Education

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Martin Himly, Chair



Stella Stoycheva, Co-chair

Overview

Ambition of Work Group A

Working Group A (WGA) focuses on cross-linking all currently active projects in the NanoSafety Cluster. In addition, WGA endeavors to align all training offers in nanosafety projects and beyond. This effort shall be including the research fields of microplastics', advanced/innovative materials', or nanomedicines' safety assessment. Joint educational strategies are developed with representatives from the currently ongoing projects. The main activity to facilitate this essential and fruitful cross-talk between the people that are actively involved in the work of the projects is executed by informative webinars and virtual training sessions. Due to this cross-linking initiative across different projects secondments of early-stage researchers to other expert centers may be envisioned.

Welcome

- **Organization by**
 - The University of Birmingham (UoB)
 - United Kingdom Centre for Ecology & Hydrology (UKCEH)
 - BioNanoNet (BNN)
 - Paris Lodron University of Salzburg (PLUS)
- **Presenter and Practical supervisor**
 - Tassos Papadiamantis (UoB)
- **For training in NanoCommons & in NanoSafety Cluster**
 - Martin Himly <orcid:0000-0001-5416-085X>
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Agenda (in CEST)

- 10:00 - Introduction round and background to the *NanoCommons* platform
- 10:20 - Preparation for the hands on session - setting up *SciNote* (registration, setting up team and project)
- 10:40 - Introduction to why using ELNs (metadata completeness, scientific QA)
- 11:00 - Hands-on session 1: Introduction to *SciNote* inventory (manage, modify, create new)
- 11:30 - Wrap up of session 1
- 11:40 - Virtual coffee break (incl. time for Q&A)**
- 11:45 - Hands-on session 2: Create experiments and import protocols/assays
- 12:15 - Wrap up of session 2
- 12:25 - Short break (incl. time for Q&A)**
- 12:30 - Hands-on session 3 (creating tasks, inviting and assigning users)
- 13:00 - Wrap up of session 3
- 13:10 - Short break (incl. time for Q&A)**
- 13:20 - Hands on session 4 (extracting results and inventories, creating reports)
- 13:40 - Summary slides of ELN use, data upload to *NanoCommons* KB, feedback survey, insight into potential further ELN applications of attendees
- 13:50 - Virtual drinks and time for personal Q&A**

Tell us briefly about your work

Please go to: www.menti.com

Enter this code: 39 88 65

Go to

www.menti.com



Enter the code

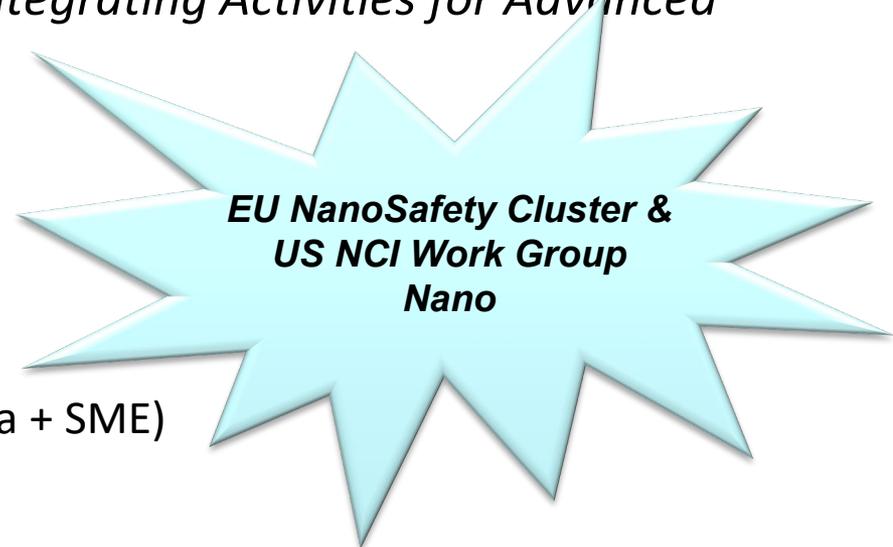
39 88 65

Overview

- H2020 research infrastructure project
 - Call Topic: *INFRAIA-01-2018-2019: Integrating Activities for Advanced Communities*

- Beneficiaries:

- 10 countries worldwide
- 14 partners:
 - 12 EU countries (academia + SME)
 - 2 US partners (academia)

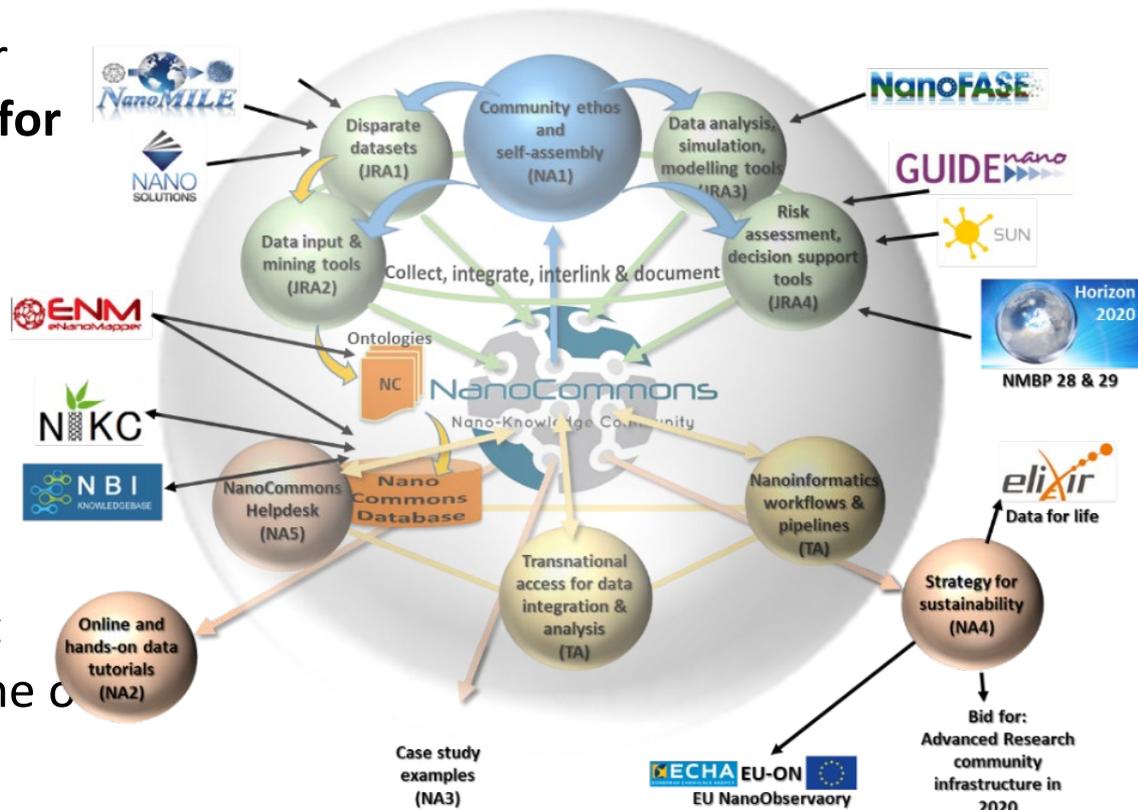


The NanoCommons consortium



The idea - problem & solution

- **Nanotechnologies** are a major area of investment & growth for the **European economy**
- Knowledge and **data** remain **fragmented** and inaccessible hampering progress
- **Read-across approaches** are **currently absent** for NMs, but would reduce the cost and time of nanosafety research and regulation



NanoCommons is creating an **e-infrastructure** platform for reproducible science, **enhancing data integration & enabling nanoinformatics workflows** to address these gaps

Data FAIRness

- To remove **barriers** for nanosafety **regulatory and industry** processes
- To develop an **integrated knowledgebase** to facilitate development and application of regulatory tools such as **grouping & read-across**
- To create an **interconnected community** *via* a **FAIR data single market**
- To enable **full exploitation of EU-funded research data** & promotion of **data-driven innovation** leading to **positive socioeconomic impact**



NanoCommons provides...

- NanoCommons **integrates the nanomaterials communities** around an agreed set of approaches for **data generation, data management and nanoinformatics** to support the risk and hazard assessment of NMs
- NanoCommons is **integrating and developing tools and services** for use by the nanomaterials communities



Experimental Workflows
Design & Implementation



Data Processing
& Analysis



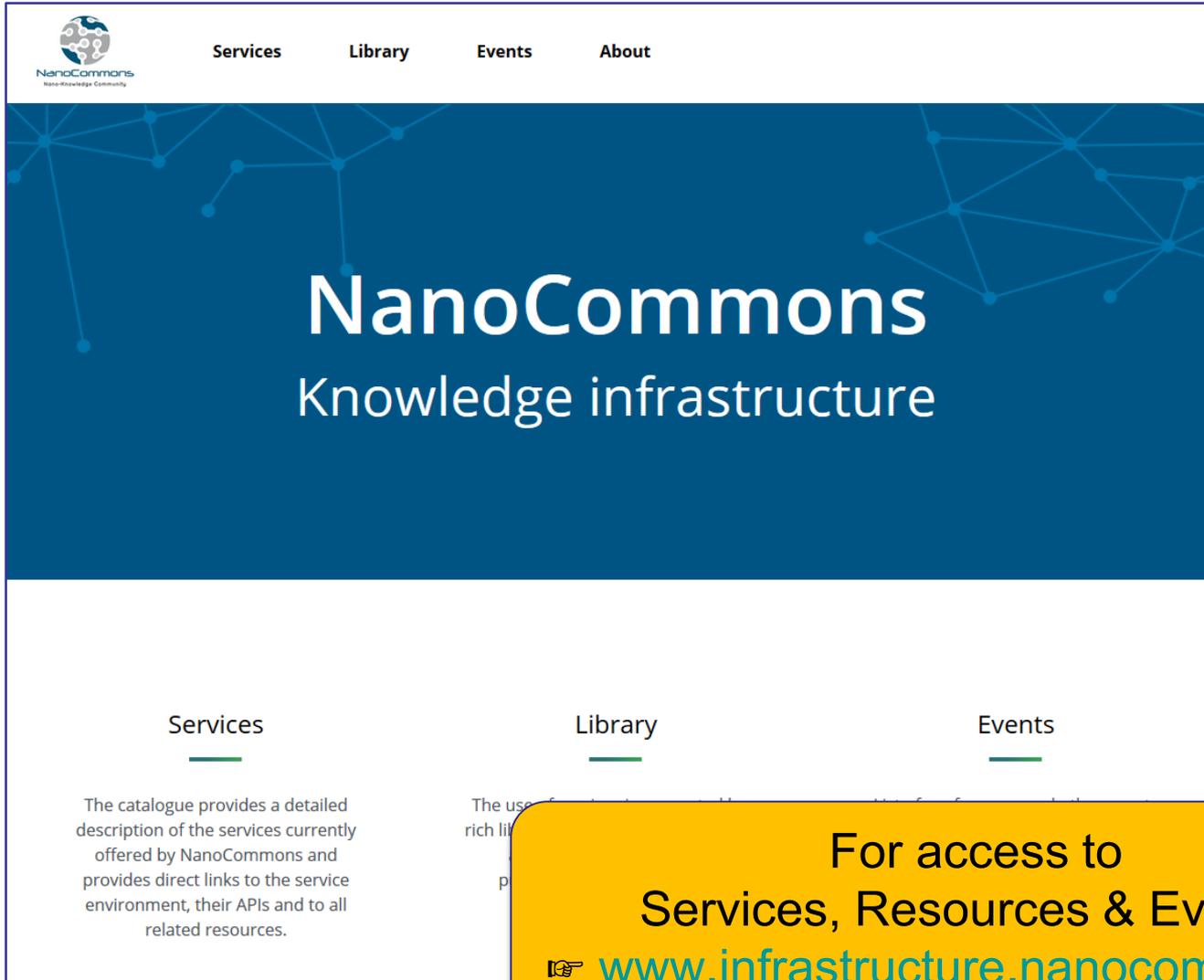
Data Visualisation
& Predictive Toxicity



Data Storage
& Online Accessibility

- These tools and services can be **accessed** through the **NanoCommons Transnational Access scheme**
- NanoCommons provides **Trainings**, accessible through the **NanoCommons Infrastructure Platform**: <https://infrastructure.nanocommons.eu/>

NanoCommons Knowledge Infrastructure



The screenshot shows the website's header with navigation links: Services, Library, Events, and About. The main banner features the text "NanoCommons Knowledge infrastructure" on a blue background with a network diagram. Below the banner, there are three columns: "Services" with a green underline and a description of the service catalogue; "Library" with a green underline and a partial description; and "Events" with a green underline. A yellow callout box is overlaid on the bottom right of the screenshot.

For access to
Services, Resources & Events:
www.infrastructure.nanocommons.eu



Services

The NanoCommons e-infrastructure aims to integrate and further develop existing state-of-the-art tools and to develop those that are needed to fill in the experimental, computational and beyond needs of the nanosafety community. The services are covering several areas, like data storage and online accessibility, data visualisation and predictive toxicity, data processing and analysis or experimental workflow design & implementation.

Category Service type Targeted users

Jaqpot 5 Computational Platform for In Silico Modelling

Train, deploy and share predictive statistical and machine learning models

Jaqpot 5 is a user-friendly web-based e-infrastructure that allows model developers to deploy their predictive models and share them through the web. The Jaqpot 5 GUI directs the model developers ...

Provided by: National Technical University of Athens

Type: Modelling tool

Applicability domain: Hazard assessment, Risk assessment, Exposure assessment

Topic: Read-across, (Quantitative) structure-activity relationship (SAR / QSAR), Information extraction, Kinetics / biokinetics, Predictive modelling

[DETAILS →](#) [VISIT SERVICE →](#)

Enalos Cloud Nanoinformatics Platform A Safe-by-Design Tool for Functionalised Nanomaterials

Nanoinformatics Enalos Nanomaterials Safe-by-Design

Provided by: NovaMechanics Ltd

Type: Modelling tool

Applicability domain: Hazard assessment, Risk assessment, Risk characterisation

Topic: Read-across, (Quantitative) structure-activity relationship (SAR / QSAR), Predictive modelling, Toxicology

[DETAILS →](#) [VISIT SERVICE →](#)

Events



Services

Library

Events

About

Category

Organisations involve

Role

Filter

Reset

Submit an event

Event	Organisations involved
<p>11th World Congress on Alternatives and Animal Use in the Life Science Conference 22 – 26 Aug 2021 / Maastricht, NL</p>	<p>Universiteit Maastricht (UM)</p>
<p>Online Jaqpot Hackathon - Take your research from the bench to the community by making your models available as a web service Webinar, Hackathon, Training, Workshop (organized by NanoCommons) 3 Jun 2020 / Online</p>	<p>The University of Birmingham (UoB) Edelweiss Connect GmbH (EwC) United Kingdom Research and Innovation (UKRI) National Technical University of Athens (NTUA) BioNanoNet (BIONANONET) Universitat Salzburg / Paris Lodron University of Salzburg (PLUS) BIOMAX Informatics AG (BIOMAX)</p>
<p>EOSC-hub Week 2020 Conference 18 – 20 May 2020 / Online</p>	<p>Edelweiss Connect GmbH (EwC)</p>
<p>Annotating Your Experimental Data workshop Webinar, Hackathon, Training, Workshop (organized by NanoCommons) 28 Apr 2020 / Online</p>	<p>The University of Birmingham (UoB) Edelweiss Connect GmbH (EwC) United Kingdom Research and Innovation (UKRI) BioNanoNet (BIONANONET) Universitat Salzburg / Paris Lodron University of Salzburg (PLUS) Universiteit Maastricht (UM)</p>
<p>Ontology Meeting Meeting (co-organized by NanoCommons)</p>	<p>The University of Birmingham (UoB) Edelweiss Connect GmbH (EwC) Universiteit Maastricht (UM)</p>

Library

This page contains resources and training materials to support NanoCommons users in getting familiar with the services and tools available in the infrastructure. On top of tutorials and video demonstrations, you will also find information on our publications (e.g. peer-review articles, presentations, posters) that may help you further in learning about NanoCommons concepts and implementations.

Category Target audience Organisations involved Service

Introduction to data /metadata management in nanosafety assessment workflows

Webinar recording

A. Papadiamantis, E. Valsami Jones, I. Lynch - University of Birmingham, UK M. Himly, University of Salzburg, AT

18 Oct 2019



OpenRiskNet webinar recordings

Webinar recording

10 Sep 2019

→ OpenRiskNet library



Introduction webinar to Guidenano risk assessment tool

Webinar recording

9 Sep 2019



Introductory video on Nanoinformatics Model for Zeta Potential Prediction Powered by Enalos
Cloud Platform

Video

9 Sep 2019



TA Calls

- NanoCommons Transnational Access (TA) provides **funded access** to state of the art **nanoinformatics and data management tools and modelling and risk assessment services**, and the expertise to implement them successfully.
- Researchers from academia and industry are invited to access the **NanoCommons services, facilities and knowledge** to advance their work, solve problems and take their research to the next level



Experimental Workflows Design & Implementation

Automated data acquisition, online lab-books, data curation templates, nanoinformatics implementation



Data Processing & Analysis

From data cleansing, mining and analysis to modelling



Data Visualization & Predictive Toxicity

Omics, QSARs, modelling and risk assessment tools



Data Storage & Accessibility

Data repositories, storage, harmonized and interoperable online access

How to apply for a TA...

https://www.nanocommons.eu/ta-access/



Home Overview e-Infrastructure Knowledge Portal Communication Contact



e-Infrastructure

Transnational Access

Awarded TA projects

Transnational Access Services

Transnational Access

Looking forward to working with you!

Home / Transnational Access

Transnational access

The NanoCommons Transnational Access (TA) is the ability of nanosafety Researchers from industry, academia and regulatory bodies to access the state-of-the-art NanoCommons expertise free of charge and take advantage of the NanoCommons services, facilities and knowledge to advance their work, solve problems and take their research to the next level.

ps://www.nanocommons.eu/e-infrastructure/

Goto the services and get in touch with the experts to design your application 15

Small selection of Online Training Tools



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TA service category	Nanoinformatics services	Training formats	Level
Experimental workflow	PC characterization protocols	Written tutorial	Basic
Data processing & analysis	Biomax data templates	Recorded webinar	Basic
	NIKC data templates	Written tutorial	Advanced
	Jaqpot platforms 4 & 5	Demo video	Advanced
		Demo video	Expert
	Enalos NanoXtract for TEM image analysis	Demo video	Basic
		Online tutorial	Basic
	Biocorona <i>in silico</i> modelling	Recorded webinar	Advanced
	OpenRiskNet e-infrastructure	Recorded webinars incl. demo videos	Basic
Recorded webinars incl. videos and documentations		Advanced	
Data visualization & toxicity prediction	Enalos cloud for zeta potential	Demo video	Basic
		Recorded webinar	Basic
	Enalos cloud for Safe-by-Design	Demo video	Basic
		Online tutorial	Basic
Data storage	SciNote		
	ACE nano Knowledge		

For access to
Services, Resources & Events:
 www.infrastructure.nanocommons.eu

The NanoCommons Knowledge Base



BioXM™ Knowledge Portal

Username:
Password:

Log in



For access to
NanoCommons Knowledge Base:

 www.nanocommons.eu

account yet? Please [register here](#).
[Forgot password?](#)
If you need help support@biomax.com
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More education on data @



ABSTRACT SUBMISSION

PARTICIPANTS REGISTRATION

🏠 | TOPICS | PROGRAM | SPONSORS & EXHIBITORS | RESOURCES |

The First nanoSAFE Digital Conference

As a response to the spread of Covid-19 the nanoSAFE community will be meeting virtually. For the first time, the “nanoSAFE Digital Conference” will be held from 16th to 20th November 2020 on a virtual platform. To enable all participants of the international conference to share the latest R&D results on environmental issues related to nanomaterials and beyond.

Stay tuned for program, sponsoring, exhibit, registration and more ...

(last update: May 12, 2020)



nanoSAFE'20

7th
international conference
on **HEALTH** and **SAFETY**
issues related to
NANOMATERIALS
for a socially responsible approach

16-20
NOVEMBER
2020

nanosafe
nanoSAFE
Digital Conference
www.nanosafe.org

In partnership with



Preliminary program on monday

Block 1 - Emerging experimental approaches in hazard and exposure assessment

- **Session 1:** Hazard assessment (human health & environmental) with focus on new developments in AOPs & IATA
- **Session 2:** Exposure assessment (determination & modeling)



Block 2 – Data workshop & E-tools for nano and beyond

- **Session 3:** Data FAIRness (hands-on, how to) & metadata completeness, scientific quality assurance
- **Session 4:** Spectrum of tools for data generation, processing, evaluation, prediction

Block 3 - Society involvement in nanorisk governance & SbD concepts - Fit for translation to sustainable development?

- **Session 5:** Discussing features of nanoRGFs in development & current state of NRGC proposals (links to industry, regulators, society)
- **Session 6:** Elaborating/summarizing on what remains from all that for SbD/sustainable development

