

NEWSLETTER #1

Project activities 09/2021 – 06/2022



**Virtual Open Innovation Platform
for Active Protective Coatings Guided
by Modelling and Optimization**

WE ARE VIPCOAT

The H2020 project „Virtual Open Innovation Platform for Active Protective Coatings Guided by Modelling and Optimization“ started on May 1, 2021 for a period of 4 years. Our VIPCOAT Consortium comprises 12 participants (5 companies and 7 research

institutions) from 8 countries (BE, DE, FR, LU, NL, NO, PT, UK) who gather all necessary background and expertise to achieve the ambitious objectives of the VIPCOAT project. VIPCOAT is coordinated by Helmholtz-Zentrum Hereon.



Our objective is to deliver an Open Innovation Platform (OIP) to support the development of new coating materials. Powered by predictive modeling technologies combined with machine learning techniques, the OIP should support design and manufacturing engineers in the development of customized and innovative coatings. The VIPCOAT platform will complement the European

Innovation System. The proposed OIP, although being designed for a multitude of industrial applications, will use active corrosion protection coatings as the specific business case for the innovation platform development and implementation. The tightly linked complementary multi-scale models distributed along the coating development chain will be the core of the platform.

Find out more about VIPCOAT, project members and objectives on www.vipcoat.eu.

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UPCOMING EVENTS

JUNE 2022

Our VIPCOAT Team will carry out an **in-situ experiment at DESY** in June 2022 to collect data for geometric analysis and modeling based design of coating microstructure based on 3D tomographic images. The event will be the first dynamic leaching experiment in the field of Cr(VI)-free protective coating investigation. VIPCOAT team has the aims for this beamtime to create, discover and collect unique data for both modelling of coating microstructure and fundamental understanding of the formation of the active corrosion protection without toxic Cr(VI) components.

JULY 2022

Our consortium partner **WIKKI** is organizing the 17th **OpenFOAM Workshop**, which will be held in Cambridge, UK from 11 to 14 July 2022, at Cambridge University. The Workshop will have a hybrid format allowing participants to join in person or online. For readers interested in joining the OpenFOAM Community, contact the Organizing committee.

[Read more](#)

AUGUST 2022

VIPCOAT consortium organizes the focused session “Modeling Sustainable Active Protective Coatings” at **European Corrosion Congress (EUROCORR22)** “**Corrosion in a Changing World – Energy, Mobility, Digitalization**”, which will be held in Berlin, Germany, from August 26 to September 01.

[Read more](#)

OCTOBER 2022

OIP **cooperation workshop** on the topic of **Open Innovation Facilitation in Horizon Europe** will be organized by VIPCOAT consortium on October 05-06 in Brussels.

FOR PEOPLE AND THEIR
FUTURE ENVIRONMENT



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LATEST ACTIVITIES

JUNE 2022

ECCOMAS Congress 2022 - VIPCOAT organized the Minisymposium “Mathematical models and simulation tools for functional coatings”. Natalia Konchakova (Hereon), Peter Kelin (Fraunhofer ITWM) and Heinz A. Preisig conducted the event together with colleagues from academia (Daniel Höche, H2020 project OntoTrans) and industry (Ulf Schoeneberg, Evonik Operations GmbH).

[Read more](#)

APRIL 2022

VIPCOAT has been presented by Lisa Depenbrock at the **Girls`and Boys`Day 2022** on April 28. Hereon organized a digital event, in which approximately 70 children participated. The annual event gives exciting insights into research.

APRIL 2022

M12 consortium meeting has been organized by team of Elsyca on April 26-29, 2022 in Mechelen, Belgian. Representatives of all members of the VIPCOAT consortium participated in the hybrid meeting. Approximately 30 partners met personally. The program of the event included two Internal workshops, a Milestone Meeting and a Report part. Partners discussed the scientific and technical progress, and prepared an action plan for the next 6 months.

FEBRUARY 2022

VIPCOAT project was presented at the **Cooperation Workshop of the OIP-projects organized by OpenModel consortia**, on February 17, 2021. Peter Klein, Heinz A. Preisig and Natalia Konchakova gave an overview and advances of the VIPCOAT project and presented some ideas for technical cooperation in the fields of multi-criteria optimization, interoperability, ProMo and BPMN.

JANUARY 2022

Position Paper: **“Open Innovation in Horizon Europe”** has been published in Zenodo on January 14, 2022. The paper summarizes the ideas of the three Horizon 2020 projects VIPCOAT, MUSICODE and OpenModel, on how to extend the concept of Open Innovation under the Horizon Europe framework program into Open Innovation Frameworks.

[Read more](#)



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LATEST ACTIVITIES

DECEMBER 2021

The VIPCOAT project team successfully carried out an experiment at **Deutsches Elektronen-Synchrotron (DESY)**. Partners from AkzoNobel, Fraunhofer ITWM and Hereon have scanned 3D microstructure of new protective coatings using nanotopography imaging technique of P05 Beamline at PETRA III.



NOVEMBER 2021

Researchers from VUB organized an **Electrochemical Doctoral School**. The Doctoral School was open for PhD students and academia / industrial researchers seeking an in-depth understanding of electrochemical phenomena.

[Read more](#)

OCTOBER 2021

VIPCOAT M6-consortium meeting in Aveiro, PT. Thomas F. Hagelien (SINTEF) presented the lecture “SOFT/DLite – Applications of ontologies” at the Workshop on Ontologies for Materials-Databases Interoperability (OMDI2021) on October 5-7, 2021.

[Read more](#)

SEPTEMBER 2021

Peter Klein (Fraunhofer ITWM) presented a lecture “Application of an Ontology Based Process Model Construction Tool for Active Protective Coatings” at **11th International Workshop on Formal Ontology meets Industry**.

[Read more](#)

SEPTEMBER 2021

Herman Terryn (VUB) provided a **keynote lecture** on “Challenges in prediction of corrosion by FEM modelling” at Corrosion Science Symposium “Advances in Corrosion Protection by Organic Coatings”.

SEPTEMBER 2021

Technical cooperation between three Horizon 2020 projects [MUSICODE](#), [OpenModel](#) and VIPCOAT was discussed at the second Open Innovation Platforms-workshop on 01-03 September, 2021. The agreement on the possible collaboration has been achieved.



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PARTNERS BEHIND VIPCOAT



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MEET TWO BEHIND VIPCOAT



Dr. Natalia Konchakova

Helmholtz-Zentrum Hereon, Institute of Surface Science
Department of Interface Modelling
Coordinator of VIPCOAT

[Interview](#)



Dr. Peter Klein

Fraunhofer-Institute of Industrial Mathematics, ITWM
Member of VIPCOAT

[Interview](#)

Do you want more information about VIPCOAT? [Visit our website!](#)