



MULTI-site organic-inorganic HYbrid CATalysts for MULTI-step chemical processes

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D9.5 - Dissemination activities report

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Scheduled Dissemination activity report update

The Dissemination activities report is a document which evolves during the lifespan of the project and aims to provide an overview of realised and planned dissemination activities towards various stakeholders. The first – here presented – report encompasses all dissemination activities of the project months 3-24. It is to be noted that pure communication activities are not part of this report, unless used to support the dissemination of research results.

This report will be accompanied by the final report to be delivered in M48 and covering the project months 25-48.

Content

1	Introduction.....	4
1.1	Purpose and scope of this document.....	4
1.2	Intended audience.....	4
2	Management of Intellectual Property Rights.....	4
2.1	Protection of results.....	4
2.2	Scientific publications.....	4
3	Relevant stakeholders.....	4
3.1	Involvement of the Advisory Board.....	4
3.2	Stakeholder Analysis.....	5
3.3	Engagement strategy with stakeholders.....	5
3.4	Results from the Stakeholder Survey.....	6
4	Dissemination actions.....	8
4.1	Partner responsibilities.....	8
4.2	Dissemination channels.....	8
4.3	Dissemination methods, materials and tools.....	9
4.3.1	Poster and roll up banner.....	9
4.3.2	Newsletter.....	10
4.3.3	Dissemination workshops.....	11
4.3.4	Summer School.....	11
4.3.5	Dissemination videos.....	11
4.3.6	Dissemination at conferences, fairs and exhibitions.....	11
4.3.7	Publications.....	12
4.4	Overview of dissemination actions.....	15
4.5	Dissemination tables.....	17
	Symbols and abbreviations.....	29

1 INTRODUCTION

1.1 PURPOSE AND SCOPE OF THIS DOCUMENT

This deliverable describes the realised dissemination activities of the MULTI2HYCAT consortium from project month 3-24 and gives an outlook of future planned dissemination activities. Communication activities are not reported here, unless they have been used to promote the dissemination actions.

In the course of the project the dissemination activity report will be updated in M48 (D9.8). The underpinning plan for dissemination and exploitation will be updated in M33 (D9.7) and the Business & Commercialisation Plan in M 48 (D9.9).

1.2 INTENDED AUDIENCE

The dissemination level of this document is “PUBLIC” and has been authorised by all project partners for publication on the MULTI2HYCAT website. The intended audience includes the MULTI2HYCAT consortium, the European Commission and every interested person.

Following this introductory chapter, Chapter 2 will briefly comment on the status quo of IPR matters. Chapter 3 explains the results of the conducted stakeholder analysis and survey. Chapter 4 briefly describes, summarizes and lists the dissemination actions. Finally, the document will partly report on communication materials that have been realized in order to engage with stakeholders and media.

2 MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS

2.1 PROTECTION OF RESULTS

Several innovations are expected to be generated by the MULTI2HYCAT partners during the course of the project. In order to manage the generated knowledge, the partners will follow a methodology which ensures its effective protection, promotion and exploitation.

The Innovation and Exploitation Manager coordinates IPR related issues. So far, new patents deriving directly from the project activities have not yet been filed. However, at a later development stage, patent filing is envisaged.

The freedom-to-operate analysis has been updated in the course of the stakeholder analysis (D9.3) when patent databases have been searched for potential matches with a combination of MULTI2HYCAT keywords. Until today, the initial freedom-to-operate analysis is still valid but extended by the results from D9.3. There are no patent infringements.

2.2 SCIENTIFIC PUBLICATIONS

During the project the IPR interests have been respected by all partners. The major concern is not to publish data that could hinder a future patent application. For all 7 publications the consent of the consortium has been obtained. For more information see chapter 4.3.6.

3 RELEVANT STAKEHOLDERS

3.1 INVOLVEMENT OF THE ADVISORY BOARD

The Advisory Board (AB) is a group of high-level experts in the domains related to the Project, coming from globally recognized academic and industrial institutions. AB members will be mainly involved in the validation of relevant project results. As the Advisory Board is composed of highly acknowledged and

reputable persons, it was impossible to meet them face-to-face, although they have been invited to participate in the consortium 18M and 24M meetings.

Due to the time constraints of these people, it has been decided in the 5th consortium meeting to provide the AB members with an overview of the achieved project results and request feedback from them in Q1/2019. Moreover, it is planned to meet some AB members in the frame of an international conference on catalysis, where they are usually present (IZC, Perth or Europacat, Aachen).

3.2 STAKEHOLDER ANALYSIS

The stakeholder analysis purpose was to identify relevant stakeholders of the MULTI2HYCAT solution(s) and relevant EU projects. The stakeholder analysis has been performed and delivered at M9 (D9.3), with the aim to assess stakeholder position towards the project's results in order to set up engagement strategies; to establish links and develop synergies with on-going EU projects for mutual benefit.

The **targeted stakeholders** were identified during the stakeholder analysis and include:

- **INDUSTRY:** is relevant for receiving technical feedback and the establishment of links.
- **ACADEMIA:** will provide relevant feedback on the scientific aspects, emerging technologies and solutions, and for future collaborations.
- **POLICY MAKERS:** are relevant for guiding the national and EU environmental strategies.
- **GENERAL PUBLIC:** will benefit of the pharmaceutical and chemical advantages obtained using the innovative MULTI2HYCAT hybrid catalysts.

15 from ~100 identified stakeholder organisations have been selected by the project partners as the TOP organisations to be contacted (TOP15). PNO retrieved individual contacts of these organisations, best suited to support the consortium with feedback on the MULTI2HYCAT idea, vision and work. Most of the contacts derive from the wider network of all project partners.

3.3 ENGAGEMENT STRATEGY WITH STAKEHOLDERS

The **one-to-one interviews and an online survey** with stakeholders were conducted in project months 20-23. The stakeholders were invited via e-mail to introduce MULTI2HYCAT and ascertain their general interest. Furthermore, the initial questionnaires have been updated in cooperation and agreement with all project partners to identify the needs of the stakeholders and their judgement on the markets and trends as well as scientific and innovation potential. The questionnaires slightly differ, depending on whether the stakeholder is a research institute or a company. Both questionnaire types contain questions related to the awareness of the MULTI2HYCAT project and funding opportunities as well as on current participation and potential interest in R&D&I activities. Besides that, the questionnaire for companies also include a section related to the companies view on its actual and potential markets and business fields as well as expectation on the market development and competition.

The questionnaires for companies and research centres are attached to D9.5. In parallel to interviews an online survey has been realised to increase the number of participants. Not every stakeholder is willing to make an appointment for an interview. Moreover, in order to achieve a critical mass, it has been decided early in the process to include other stakeholders outside the TOP15 list in the survey.

The survey will remain online on the MULTI2HYCAT website, so that interested persons can still comment on the project (see Figure 3-1). The feedback will be mirrored against the current survey outcomes.

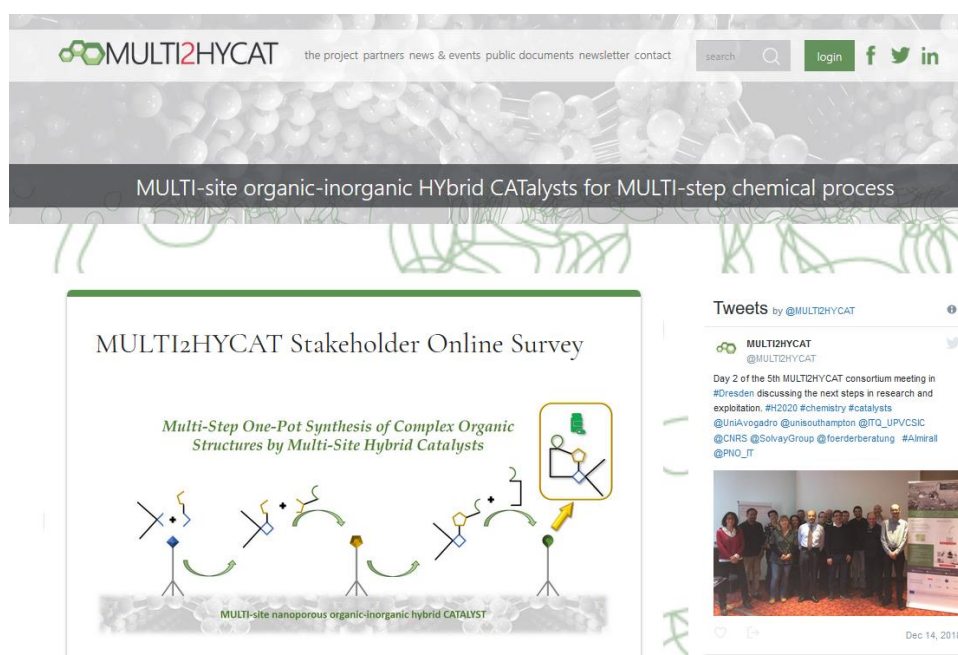


Figure 3-1 Online survey on MULTI2HYCAT website

3.4 RESULTS FROM THE STAKEHOLDER SURVEY

From 133 personal invitations a total of 14 responded. 7 from the TOP15 stakeholders participated in the survey (see Table 3-1). The main results from the stakeholder survey is, that 93 % of the respondents (13 out of 14) are convinced that **the MULTI2HYCAT approach is promising**. The most-mentioned **advantages** were the easier separation and reuse/recycling of catalysts and a higher selectivity, whereas, **drawbacks** mentioned were a lack of hydrothermal stability, higher preparation and regeneration costs, diffusion limitations and adsorption issues. 1 of 14 participants rated the approach as not promising, indicating leaching and instability as drawbacks. However, this option is probably based on the misinterpretation of the term “hybrid materials” with “supported catalyst”.

Further, participants provided ideas of other **conceivable catalysts to be immobilized and reactions to be conducted**. Related to the value chain, **2 or 3 out of 6 companies** have mentioned to be a potential **catalyst producer or end users** of the MULTI2HYCAT development, respectively. As such they could become future partners in the MULTI2HYCAT project.

All survey participants see a high potential in **bio-based chemicals and processes**, as these can replace fossil-based products over time and satisfy the demand of “organic” or “natural” nutritional additives or healthcare products. However, also **pitfalls**, *e.g.*, the misconception, that a process is sustainable, just because it is bio-based, or **bottlenecks**, *e.g.*, how to transpose current chemical processes or create new ones being fully compatible with sustainability, are mentioned.

For increasing **profitability**: Both companies and research organisations agree in general. **Digitalization** is considered to be the main driver for growth.

Table 3-1: Background data about the survey participants. CO = company, RO = research organisation

Organisation type	Position or business/research area	Organisation	Number of employees in department
RO (1)	Group leader – Chemical Technology	<i>TOP15 Stakeholder:</i> CSIC - Consejo Superior de Investigaciones Científicas	≈ 60
RO (2)	Group Leader – Biorefineries	DBFZ e.V. – Deutsches Biomasse Forschungszentrum	≈ 10 in group, 30 in department
RO (3)	Group Leader – Catalysis and Chemical Reaction Engineering	National Institute of Chemistry Slovenia	≈ 45
RO (5)	Deputy director and senior scientist – Renewable resources	<i>TOP15 Stakeholder:</i> E2P2L UMI 3464 CNRS/Solvay	≈ 20 scientists (+ > 20 PhD students, postdocs and interns p.a.)
RO (6)	Professor	<i>TOP15 Stakeholder:</i> ICIQ – Institut Català d'Investigació Química	≈ 10 in group
RO (7)	Group leader – Chemical Engineering	<i>TOP15 Stakeholder:</i> University of Manchester	≈ 45
RO (9)	Professor – Bioenergy and Catalysis	European research institute	≈ 50
RO (14)	Professor – Chemical Engineering	Eindhoven University of Technology	≈ 450
CO (4)	Middle management - Catalysis	<i>TOP15 Stakeholder</i>	n.a.
CO (11)	Middle management - Healthcare	<i>TOP15 Stakeholder</i>	n.a.
CO (10)	Scientific staff - Catalysis	<i>TOP15 Stakeholder</i>	≈ 150
CO (8)	Consultants - Chemistry & Materials	PNO Consultants	≈10
CO (12)	Scientific staff	Air Liquide	≈ 550
CO (13)	Scientific staff	HyGear	≈7

4 DISSEMINATION ACTIONS

Dissemination activities are a key aspect of the MULTI2HYCAT project and will include the delivery of the concept, basic idea, vision and finally results to the largest possible audience to engage every stakeholder and the general public at European and global scale.

First project outcomes have been disseminated to the appropriate target stakeholders by various means:

- Participation in the most important events in the scientific field such as exhibitions, conferences, workshops, specialized international meetings, etc.;
- Publications of results (e.g., Scientific Publications, Non-scientific Articles, Conference proceedings) in high-level international journals, magazines, etc., but also daily press

In all dissemination actions the consortium explicitly acknowledged that their action has received EU funding.

4.1 PARTNER RESPONSIBILITIES

The dissemination strategy foresees to actively involve all partners. The partner responsible for dissemination (PNO) is working to ensure proper information within the consortium to support the full communication of the project results. PNO continuously requests information from the project partners about their dissemination activities and keeps track record.

All consortium partners have an important role in the dissemination of project results and all the partners are committed to present project outcomes. Scientific publications and the underpinning meta research data must be made available by each partner in their respective repositories.

The search of relevant events is ongoing and will continue until the end of the project. The results of the search are posted on the project website to promote an active participation by both, partners and external contacts.

4.2 DISSEMINATION CHANNELS

The main dissemination channels that have been used by the MULTI2HYCAT consortium to disseminate project results towards the external world are:

- **Website:** The MULTI2HYCAT website is the central point for communication and dissemination, where all material is made publicly available (posters, newsletters, publications, etc.) under PUBLIC DOCUMENTS. Moreover, all past and future planned events are announced and listed under NEWS and EVENTS. Interested stakeholders can prepare themselves to meet project partners. They also have the possibility to subscribe to the newsletter to be informed about the project and results.
- **InnovationPlace** is an online PNO service supporting organisations to achieve their strategic R&D objectives through the matching and managing of R&D projects, organisations and grants. During the last years, the number of users registered in the web platform has drastically increased. All MULTI2HYCAT news and events are announced via this platform.
- **Ricerca & Innovazione** is the Italian PNO Open Innovation platform that supports collaborative research through the successful combination of research and development projects, excellent European organizations and the most important public funding opportunities at European, national and regional level. The Italian audience is informed about MULTI2HYCAT in the same way as one InnovationPlace, but in local language.
- The **landing page** MULTI2HYCAT on the German PNO website to attract and inform academia, industry and the public in local language and refer them to the project website of MULTI2HYCAT.
- **Links on project partners websites** also refer to the project website of MULTI2HYCAT.

- The world's most famous social networks: **LinkedIn, Twitter and Facebook.**

The external link to the different web based tools for dissemination are reported on Table 4-1 together with the current number of users reached.

Table 4-1 – dissemination channels

Channels	Link	N. of users
MULTI2HYCAT website	https://www.multi2hycat.eu/	1,483
Innovation Place: CTECH/PNO web-portal (Europe) (news published through news and newsletter)	https://www.innovationplace.eu/	> 10,000
Ricerca&innovazione: CTECH/PNO web-portal (Italy) (news published through news and newsletter)	http://www.ricercaeinnovazione.it/	> 6,000
Landing page MULTI2HYCAT on PNO website	https://www.pnoconsultants.com/de/projekte/multi2hycat/	119
Facebook MULTI2HYCAT account	https://www.facebook.com/MULTI2HYCAT/	33
LinkedIn CTECH/PNO Innovation Place group	https://www.linkedin.com/groups/4086674	958
LinkedIn CTECH/PNO company page	https://www.linkedin.com/company/innovation-place	356
LinkedIn PNO Consultants GmbH	https://www.linkedin.com/company/pno-consultants-gmbh/	119
LinkedIn MULTI2HYCAT project	https://www.linkedin.com/company/multi2hycat/	9
Twitter CTECH/PNO Innovation Place group	@INNOVATION_PL	388
Twitter PNO Consultants GmbH	@foerderberatung	295
Twitter MULTI2HYCAT project	@MULTI2HYCAT	76
Instituto de Tecnología Química (ITQ-CSIC) –Website ITQ – Facebook ITQ – Twitter Youtube Channel - ITQ	http://itq.upv-csic.es/ https://www.facebook.com/ITQInstitutoDeTecnologiaQuimicaUPVCSIC https://twitter.com/ITQ_UPVCSIC https://www.youtube.com/channel/UCdPfnqSkaRZA23kHAFDMLcA	
ResearchGate	https://www.researchgate.net/project/Multi2HyCat	

4.3 DISSEMINATION METHODS, MATERIALS AND TOOLS

Various methods, materials and tools have been developed and will be updated during the next months to facilitate the dissemination of results. Below the main actions are briefly described.

4.3.1 Poster and roll up banner

A project poster (see Figure 4-1) and a roll up banner (see Figure 4-2) were realised by PNO in concomitance with the participation of MULTI2HYCAT partners to a relevant international event (i.e. scientific conference, international fair, or similar). The poster displays the project objectives and benefits, together with a contact sections and the logos of the partners involved in the project. The roll up banner displays the project objectives, impacts, applications, contact information and logos of the consortium. Poster and roll up banner are available in the Public Document Page of the project website

<https://www.multi2hycat.eu/public-documents/>. The partners can reproduce the material and use it for their events.

The poster will be updated in project year 3.



Figure 4-1 – The project poster



Figure 4-2 - The project roll up banner

4.3.2 Newsletter

Two newsletters (Nr. 2 and 3) were related to disseminate results as indicated in Table 4-2. The second newsletter has been published at the beginning of M14 (Feb 2018), presenting first results achieved during the first year and providing an outlook on further works. The 3rd newsletter was published after the M18 Project Meeting, summarizing the results achieved in the project months 1-18. The 4th newsletter is planned to be published in month 25, dedicated to report about recent project results.

In all newsletters the reader can find information about past events, which were attended by the project partners, about new joint publications and future events, where project partners can be met to exchange ideas about the project.

Table 4-2 – project newsletters related to dissemination activities

Newsletter number	Month	Issues of the newsletter	Status
2	13	Updates of the first-year project results, actions and outlook	Published
3	19	Updates of the project results and actions performed during M1-M18 and outlook	Published
4	25	Updates of the project results and actions performed during M18-M24 and outlook	Planned

4.3.3 Dissemination workshops

In September 2017 in Rome (Italy), **MULTI2HYCAT organized a first workshop** in the framework of the 2017 edition of “*NanoInnovation, Conference and Exhibition*” where the project results were presented. This workshop was organized jointly with another Horizon 2020 Project, namely NANOMEMC² <http://www.nanomemc2.eu>.

A **second and third workshop** are planned in the second project period.

4.3.4 Summer School

On July 5th -6th 2018, in Valencia (Spain) a **MULTI2HYCAT Summer School** was organized by the Instituto de Tecnología Química (ITQ) in collaboration with all project partners with 50 participants.

The MULTI2HYCAT Summer School event was destined to PhD students and young post-doc researchers. The program consisted of Invited Tutorial Lectures delivered by top experts in the field of heterogeneous catalysis, poster session and flash short oral communications by students from selected posters. The main topics of the MULTI2HYCAT Summer School are focused on Nanobuilding Precursors; Organosiliceous Hybrid Materials; Metallorganic Frameworks; Covalent Organic Frameworks; Molecular Sieves; Synthesis and Characterization of Hybrid Materials; Hybrid and Porous Materials as Solid Catalysts; Commodities Production through Catalytic Pathways; Fine Chemical Synthesis; Catalytic Synthesis of Pharmaceutical Compounds; Asymmetric Catalysis.

A dedicated website was set-up for the event (<http://www.multi2hycat-summerschool.eu/#>) and a public summary was published by PNO giving impressions and details of the talks and speakers. This summary is deposited in the Public Documents section of the MULTI2HYCAT website as well as on Zenodo¹.

4.3.5 Dissemination videos

Explanatory videos will be prepared, when the catalyst has been selected. Videos could reach potential stakeholders worldwide, by exploiting the potential of the internet network. The preferred distribution channel would be Youtube and linked to any other media.

4.3.6 Dissemination at conferences, fairs and exhibitions

Until today, the consortium attended 20 conferences, 2 fairs and 1 exhibition. Exemplary three actions are presented below.

PNO attended 2 highly acknowledged **chemical fairs** in June 2018, i.e., the **ACHEMA 2018** and the **ChemspecEurope 2018** to get in direct contact with already identified and potentially new stakeholders. The project has been presented to the companies' and organisations' representatives. The stakeholders' potential interest in the project results and a future collaboration was evaluated. The Chemspec Europe is organized by Mack Brooks Exhibitions Ltd. on a yearly basis within a series of other exhibitions focused on fine and specialty chemicals, e.g. Chemspec India and Chemspec Asia. PNO approached 14 potential stakeholders present at the exhibition.

In September 2018 Almirall presented the MULTI2HYCAT project in the frame of a round table discussion focussed on Research Collaborations in the Pharmaceutical Industry at the exhibition **Biospain2018**. Aspects like Public Private Partnerships with public funding, Open Innovation as well as Incentives and Barriers in Research Collaborations were discussed. The experience gained in MULTI2HYCAT were shared with the public (see Figure 4-3). The presentation is available on the Multi2HYCAT website.

¹ <https://doi.org/10.5281/zenodo.2453334>



Figure 4-3 - Presentation at BioSpain 2018

4.3.7 Publications

A series of **Publications** (at least 6) are foreseen during the project. Until today, 7 scientific papers have already been published in different peer reviewed journals, as summarized in Table 4-3.

The bibliographic metadata of all forms of published output is stored at the Universities institutional repositories, so there is a comprehensive record of research activity. This policy applies to all researchers in the consortium publishing and/or disseminating research outputs.

The following research outputs **must** be deposited and made publicly available in the Universities institutional repositories:

- the bibliographic metadata of all forms of published output, so there is a comprehensive record of research activity;
- the final, refereed, corrected, accepted manuscripts of all peer-reviewed journal articles and peer-reviewed conference articles at the point of acceptance for publication;
- research work submitted as a thesis for a higher degree;
- if it is not suitable for an established disciplinary or other external repository, research data identified as significant under the Universities *Research Data Management Policy*, including data underpinning publications;
- other forms of research output not suitable for an established disciplinary or other external repository, where open access is specified by a funding body as a condition of award;
- outputs which the University issues with an ISSN, ISBN or DOI.

Table 4-3 – Scientific publications published from M1 to M24

Type of scientific publication	Title of the scientific publication	DOI	ISSN or eSSN	Authors	Title of the journal or equivalent	Number, date	Publisher	Year of publication	Public & private participation	Peer-reviewed	Is/Will open access provided to this publication
Article in journal	Mesoporous silica scaffolds as precursor to drive the formation of hierarchical SAPO-34 with tunable acid properties	10.1002/chem.201701978	1521-3765	I. Miletto, G. Paul, S. Chapman, G. Gatti, L. Marchese, R. Raja, E. Gianotti	Chemistry a European Journal	Vol 23, Issue 41, 2017	Wiley	2017	NO	YES	Yes - Green OA [12 months embargo]
Article in journal	First principles study of 2D layered organohalide tin perovskites	10.1063/1.4985054	0021-9606	A. Fraccarollo, L. Canti, L. Marchese, M. Cossi	Journal of Chemical Physics	Vol 146, Issue 23, 2017	American Institute of Physics Inc.	2017	NO	YES	Yes - Green OA [12 months embargo]
Article in journal	Mesoporous silica nanoparticles incorporating squaraine-based photosensitizers: a combined experimental and computational approach	10.1039/c7dt03735j	1477-9226	I. Miletto, A. Fraccarollo, N. Barbero, C. Barolo, M. Cossi, L. Marchese, E. Gianotti	Dalton Transactions	Vol 47, Issue 9, 2018	RSC	2018	NO	YES	Yes - Green OA [12 months embargo]

Article in journal	Ab initio design of low band gap 2D tin organohalide perovskites	10.1021/acs.jpcc.7b08928	19327447	A. Fraccarollo, L. Marchese, M. Cossi	Journal of Physical Chemistry C	Vol 122, Issue 7 2018	American Chemical Society	2018	NO	YES	Yes - Green OA [12 months embargo]
Article in journal	Hierarchical SAPO-34 Architectures with Tailored Acid Sites using Sustainable Sugar Templates	10.1002/open.201800001	2191-1363	I. Miletto, C. Ivaldi, G. Paul, S. Chapman, L. Marchese, R. Raja, E. Gianotti	Chemistry Open	Vol 7, Issue 4, 2018	Wiley	2018	NO	YES	Yes – Gold OA, fee: 1.800 €
Article in journal	Combined solid-state NMR, FT-IR and computational studies on layered and porous materials	10.1039/c7cs00358g	03060012	G. Paul, C. Bisio, I. Braschi, M. Cossi, G. Gatti, E. Gianotti, L. Marchese	Chemical Society Reviews	47/15	Royal Society of Chemistry	2018	NO	YES	Yes - Green OA [12 months embargo]
Article in journal	Chiral hybrid materials based on pyrrolidine building units to perform asymmetric Michael additions with high stereocontrol	10.1039/c8cy01650j	20444753	S. Llopis, T. García, Á. Cantín, A. Velty, U. Díaz, A. Corma	Catalysis Science & Technology	8/22	Royal Society of Chemistry	2018	NO	YES	Yes - Green OA [12 months embargo]

4.4 OVERVIEW OF DISSEMINATION ACTIONS

Partners are requested to maintain an active participation within the dissemination strategy. Proactive and balanced levels of participation will have profound effects throughout the whole project and will guarantee that the dissemination techniques are applied to the fullest possible extent. The following tables provide a summary of all actions done and the number of persons reached from month 3-24.

Table 4-4 - Specify the number of Dissemination and Communication activities linked to the project for each of the following categories

Specify the number of Dissemination and Communication activities linked to the project for each of the following categories	Organisation of a Conference	Organisation of a Workshop	Press release	Non-scientific and non-peer-reviewed publication (popularised publication)	Exhibition	Flyer	Training	Social Media	project website	Communication Campaign (e.g. Radio, TV) (e.g. Radio, TV)	Participation to a Conference	Participation to a Workshop	Participation to an Event other than a Conference or a Workshop	Video/Film	Brokerage Event	Pitch Event	Trade Fair	Participation in activities organized jointly with other H2020 projects	Other
UPO			9							1	15		2						
UoS											1								
Solvay																			
PNO-CTECH		1						93	51				2				2		9
ITQ-CSIC								10	2		4		2						4
CNRS																			
CAGE																			
ALMIRAL					1														
TOTAL	0	1	9	0	1	0	0	103	53	1	20	0	6	0	0	0	2	0	13

Table 4-5 - Specify the estimated number of persons reached, in the context of all dissemination

Specify the estimated number of persons reached, in the context of all dissemination	Scientific Community (Higher Education, Research)	Industry	Civil Society	General Public	Policy Makers	Media	Investors	Customers	Other
UPO	750	200		150,000					
UoS	800	300			100	100			
Solvay									
PNO-CTECH	4,631	7,987		41,760					30
ITQ-CSIC	3,250			11,500					
CNRS									
CAGE									
ALMIRAL	700	773				45	54		
TOTAL	10,131	9,260	0	203,260	100	145	54	0	30

4.5 DISSEMINATION TABLES

Dissemination Tables are regularly distributed to each partner in order to collect and monitor dissemination progress. Each table will summarize the dissemination activities attended or foreseen by each partner within the coming months.

The tables below report all the dissemination initiatives implemented for the MULTI2HYCAT project.

The present plan will be constantly updated with specific tables describing relevant dissemination activities implemented and planned at partners' level.

UPO



Description of events attended

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website	Flyers distributed
Conference - Oral presentation	UPO	5th International Conference on Multifunctional, Hybrid and Nanomaterials "Creating Accessible Acid Sites in Hierarchical Zeolites and Zeotype Materials" by E. Gianotti (speaker), A. Erigoni, C. Ivaldi, I. Miletto, R. Raja, L. Marchese	06-10 March 2017	Lisbon, Portugal	Research organizations/ Academia	800	USA, Europe, China, Japan	https://www.elsevier.com/events/conferences/international-conference-on-multifunctional-hybrid-and-nanomaterials	
Conference - Oral presentation	UPO	5th International Conference on Multifunctional, Hybrid and Nanomaterials	06-10 March 2017	Lisbon, Portugal	Research organizations/ Academia	800	USA, Europe, China, Japan	https://www.elsevier.com/events/conferences/international-	

		“Accurate calculation of host-guest interaction energies: the balance of electrostatic and dispersion terms” by M. Cossi (speaker), A. Fraccarollo, L. Canti, L. Marchese						conference-on-multifunctional-hybrid-and-nanomaterials	
Conference - Oral presentation	UPO	19th International Symposium on Intercalation Compounds- “Ab initio and classical modeling: a tool for the design and characterization of new materials” by M. Cossi (speaker)	28 May - 1 June 2017	Assisi, Italy	Companies / Research organization s/ Academia	200	Europe, USA, Asia	http://isic19.chimfarm.unipg.it/	
Conference - Poster presentation	UPO	International CECAM Workshop "Tackling complexity of the nano/bio interface - computational and experimental approaches" “Organic-inorganic silica-based hybrid materials as heterogenous catalysts for pharma industry” by M. Corno (presenter), I. Miletto, E. Gianotti, M. Cossi, L. Marchese	12-16 June 2017	Bremen, Germany	Research organization s/ Academia	60	Europe, USA	http://www.bccms.uni-bremen.de/veranstaltungen/2017/cecam-nanobio/	
Conference - Oral presentation	UPO	EUROPACAT 2017 “Accessible acid sites in hierarchical architectures for Beckmann rearrangement” by E. Gianotti (speaker), A. Erigoni, I. Miletto, S. Chapman, R. Raja, L. Marchese	27-31 August 2017	Florence, Italy	Companies / Research organization s/ Academia	1700	Europe	http://www.europacat2017.eu	

Conference - Oral presentation	UPO	EUROPACAT 2017 "Accurate calculation of dispersion energies in hybrid systems and in gas adsorption processes" by L. Canti, A. Fraccarollo, L. Marchese, M. Cossi (speaker)	27-31 August 2017	Florence, Italy	Companies / Research organizations / Academia	1700	Europe	http://www.europacat2017.eu	
Conference - Poster presentation	UPO	11th Triennial Congress of the World Association of Theoretical and Computational Chemists, WATOC 2017 "QM modeling of organic-inorganic hybrid materials as heterogeneous catalysts for pharma industry" by M. Corno (presenter), I. Miletto, E. Gianotti, M. Cossi, L. Marchese	27 August - 1 September 2017	Munich, Germany	Companies / Research organizations / Academia	1500	Europe, USA, Asia	http://www.watoc2017.com	
Conference - Oral presentation	UPO	XXVI Congresso Nazionale della Società Chimica Italiana "Organic-inorganic hybrid materials as heterogeneous catalysts for pharma industry" by M. Corno (speaker), I. Miletto, E. Gianotti, M. Cossi, L. Marchese	10-14 September 2017	Paestum (SA), Italy	Research organizations / Academia	500	Italy	http://sci2017.org	
Conference - Poster presentation	UPO	CHESS 2017 – Conventional and high-energy spectroscopies for inorganic, organic and biomolecular surfaces and interfaces. "A combined FTIR and SS MAS NMR characterization of acid sites in hierarchical architectures for	27-30 November 2017	Florence (FI), Italy	Research organizations / Academia	70	Italy	https://www2.chim.unifi.it/cmprov-p-297.html	

		Beckmann rearrangement” by C. Ivaldi (presenter), I. Miletto, S. Chapman, R. Raja, L. Marchese, E. Gianotti.							
Conference - Oral presentation	UPO	NanoInnovation, Conference and Exhibition “MULTI2HYCAT Project: MULTI-site organic-inorganic HYbrid CATalysts for MULTI-step chemical process” by Enrica Gianotti	September 26-29, 2017	Rome, Italy	Companies /Research organizations/ Academia	1500	Italy, Europe	http://www.nanoinnovation.eu	
Congress - Oral presentation	UPO	Psi-k workshop 2D layered materials for optoelectronics: theoretical/computational perspective “Ab initio design of 2D Hybrid Organohalide Perovskites with Tunable Band Gap” by M. Cossi (speaker), A. Fraccarollo, L. Marchese	18-19 December 2017	Rome, Italy	Companies/ Research organizations/ Academia	25	Europe	https://sites.google.com/view/2ppt/home	
Congress - Oral presentation	UPO	ABXPV18 and PEROPTO18 conference “Ab Initio Design of 2D Hybrid Organohalide Perovskites with Tunable Band Gap” by M. Cossi (speaker), A. Fraccarollo, L. Marchese.	27 February - 1 March 2018	Rennes, France	Companies/ Research organizations/ Academia	100	Europe, USA, Asia	http://www.nano.org/ABXPV18PEROPTO/home	

School - Oral presentation	UPO	EFCATS School on Catalysis “Creating Hierarchical SilicoAluminoPhosphates with Tailored Acid Sites using Bottom-up Synthetic Strategies” by C. Ivaldi (speaker), I. Miletto, S. Chapman, R. Raja, L. Marchese and E. Gianotti	25-29 June 2018	Liblice Castle, Czech Republic	Companies/ Research organization s/ Academia	80	Europe, USA, Asia	http://www.jh-inst.cas.cz/efcats.school/	
Conference – Oral Presentation	UPO	XLVI Congresso Nazionale di Chimica Fisica (XLVI National Congress of Physical Chemistry) “Expanding beyond the Micropore:Active Site in Hierarchical silicoaluminophosphates Catalysts” by I. Miletto, C. Ivaldi, S. Chapman, R. Raja, L. Marchese and E. Gianotti (speaker)	25-28 June 2018	Bologna, Italy	Research organization s/ Academia	200	Italy	https://eventi.unibo.it/congresso-dcf-2018	
School – Oral presentation	UPO	<u>MULTI2HYCAT SUMMER SCHOOL</u> <i>Creating hierarchical silicoaluminophosphates with tailored acid sites using bottom-up synthetic strategies</i> Authors: C.Ivaldi, I. Miletto, G. Paul, S. Chapman, R. Raja, L. Marchese, E. Gianotti	5-7 July 2018	Valencia	Academia	60	Europe / Asia	http://www.multi2hycat-summerschool.eu	
Conference – Oral presentation	UPO	<u>XX Congresso Nazionale di Catalisi e XX Congresso Nazionale della Divisione di Chimica Industriale</u> <u>Oral presentation:</u>	2-5 September 2018	Milano	Academia / Companies / Research Centers	100	Italy	https://www.gic-dichin2018.polimi.it/index.php/GIC-DiChIn2018/gic-	

		<p><i>"Accessible acid sites in hierarchical architectures for Beckmann rearrangement"</i></p> <p>Authors: E.Gianotti, I. Miletto, C. Ivaldi, S. Chapman, R. Raja, L. Marchese</p>						dichin2018/schedConf/overview	
Conference – Poster presentation	UPO	<p><u>Workshop Advanced Inorganic Materials:</u> green and unconventional synthesis approaches and functional assessment</p> <p>Title: <i>"Sustainable saccharide templates to drive the formation of hierarchical SAPO-34 with tunable acid properties"</i>.</p> <p>Authors: C.Ivaldi, I. Miletto, G. Paul, S. Chapman, R. Raja, L. Marchese, E. Gianotti</p>	5-7 September 2018	Padova	Academia / Companies /Research Centers	120	Europe / Asia/ USA	http://www.chimica.unipd.it/silvia.gross/workshop/home.html	

UoS

Description of events attended:

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website	Flyers Distributed
Conference American Chemical Society National Meeting & Exposition, Boston, United States.	University of Southampton	Recyclable stereoselective heterogeneous secondary amine organocatalysts for enal activation.	19 - 23 Aug 2018.	Boston, USA	Academics, Industrialists	1000	USA, Europe and worldwide	https://www.acs.org/content/acs/en/pressroom/news-room/meeting-news-releases-fall-2018.html	no

SOLVAY**NO ACTIVITIES TO REPORT**

PNO/CTECH**Description of events attended - PNO**

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website	Flyers Distributed
Event OTHER EV	PNO	MULTI2HYCAT presentation at Heraeus Holding GmbH	07.05.2018	Hanau	industry	12	Germany		10
Fair	PNO	Achema 2018	14.06.2018	Frankfurt /Main	scientific, industry, investors	25	Germany	https://www.achema.de/de.html	
Fair	PNO	Chemspec Europe 2018	21.06.2018	Cologne	scientific, industry, investors	25	Germany	www.chemspeurope.com/2018/english/	
other	PNO	VCI "Chemistry Day"	22.09.2018	Hanau, DE	General public, industry	2	Germany	https://www.vci.de/services/termine-veranstaltungen/tag-der-offenen-tuer-der-chemie-2018.jsp	2

Description of events attended - CTECH

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Joint H2020 Event	CTECH	NanoInnovation 2017	26/29-09-2017	Rome, Italy	Companies/ Research organizations/ Industrial associations	20 attendees 95 registered 1250 pax to the general event	International	http://www.nanoinnovation.eu/2017/
Congress, poster presentation	CTECH	10th World Congress of Chemical Engineering 2017	2-10-2017	Barcelona, Spain	Companies/ Research organizations/ Industrial associations		International	http://www.wcce10.org

CSIC-ITQ



Description of events attended

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website
Conference (Poster)	ITQ-CSIC	Hybrid Super-Acid Solid Catalysts for Anisole Friedel-Crafts Acylation	26-29/10/2017	Rome (IT)	From academia and industry	500 persons	International	http://www.nanoinnovation.eu/2017/
Conference (Oral)	ITQ-CSIC	REACCIÓN DE ACOPLAMIENTO SUZUKI-MIYaura PARA LA OBTENCIÓN DE BIARILOS DE INTERÉS EN LA INDUSTRIA FARMACÉUTICA	25-27/06/2018	Valencia (Spain)	Academia Researchers – PhD Students	250 persons	International	https://www.secat.es/jiii/
Conference (Poster)	ITQ-CSIC	CATALIZADORES HÍBRIDOS ORGANOSILÍCEOS CON CENTROS BÁSICOS PARA LA FORMACIÓN DE ENLACES C-C	25-27/06/2018	Valencia (Spain)	Academia Researchers – PhD Students	250 persons	International	https://www.secat.es/jiii/
Summer School (Oral)	ITQ-CSIC	HETEROGENEOUS HYBRID BASE CATALYSTS – SYNTHESIS AND CATALYTIC TESTS	25-29/06/2018	Liblice Castle (Czech Republic)	Academia Researchers – PhD Students	250 persons	International	http://www.jh-inst.cas.cz/efcatschool/

Conference (Oral)	ITQ-CSIC	Reacciones de acoplamiento Suzuki-Miyaura para la obtención de biarilos de interés en la industria farmacéutica	09-14/09/2018	Coimbra (Portugal)	Academia Researchers – PhD Students	400	International	http://cicat2018.evetos.chemistry.pt/
Summer school + conference (Oral)	Andrea Erigoni, Urbano Díaz, Candela Segarra, M ^a Consuelo Hernández, Fernando Rey	ORGANOSILICEOUS HYBRID BASE CATALYSTS – SYNTHESIS AND REACTIVITY	25-29/06/2018	Liblice (CZ)	Graduate students, researchers	50	International	http://www.jh-inst.cas.cz/efcats.school/

CNRS.



NO ACTIVITIES TO REPORT

CAGE.



NO ACTIVITIES TO REPORT

Almirall S.A.



Description of events attended

Type of activities	Main leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed	Link to the website	Flyers Distributed
Biotech Event (Exhibition)	Almirall S.A.	Preclinical Research Collaborations in the Pharmaceutical Industry: incentives and barriers	04.10.2018	Sevilla (Spain)	Biotechs, Industrie, Public Organisations working on health	1550 attendees	EU mainly	https://biospain2018.org/	No

Symbols and abbreviations

AB	Advisory Board
CA	Consortium Agreement
DST	Decision Support Tool
GA	Grant Agreement
I&EM	Innovation and Exploitation Manager
M	Month
NDA	Non-disclosure agreement
NGO	Non-Governmental Organisation
PM	Project Manager
SME	Small and Medium-sized Enterprises

