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Deliverable report

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Organisation name of lead

contractor for this deliverable: **CNRS**



Systematic, Material-oriented Approach using Rational design to develop break-Through Catalysts for automotive PEMFC

1/ Dissemination plan

The dissemination activities of the SMARTCat project will aim at:

- ⇒ Sharing the knowledge created by SMARTCat beyond the implicated partners to a wider community for potential use of project results taking into account the protection of IP.
- ⇒ Informing the scientific and industrial community as well as a broader public about the latest project results and findings.
- ⇒ Creating awareness in the general public with respect to environmental problems and the role fuel cell could play in the future.

Dissemination tools and activities:

Dissemination will be carried out and monitored through a number of planned activities and tools adapted to the target audience, after agreement of the consortium:

- **Project web-site**

The project website will be made available within the first year (Deliverable 6.1) of the project and updated on a regular basis. It will contain a summary of the project as well as calendar of events, contact points, press releases, published presentations etc. The project website will be mainly directed to i) the scientific community to raise interest on the research topic and to create a contact tool to facilitate the collaboration with external scientists, ii) the funding bodies as the website will become one of the tools to keep them updated on the project status, iii) the general public to create awareness on fuel cells. The project web-site will be created and maintained by the CNRS.

- **Scientific publications**

Partners are encouraged to publish project results in international peer-reviewed journals.

The following tentative list summarizes the potential targeted journal with their impact factor and Open Access policy. In all case the cost are very high and it is anticipated that it will be impossible to publish in Open Access high impact journals due to these costs. In all cases, the accepted manuscript (in the form of a pdf version of the latest submitted word or latex version of the accepted manuscript) will be made available to non-commercial repository (this includes the SMARTCat website, institution and funding body repositories, the websites of SMARTcat participants)

Journal	Open access policy of journal
Nanoletters, (ACS), IF = 13.025	4000 USD (2000 USD for ACS members)*
Chemistry of Materials (ACS), IF = 8.238	4000 USD (2000 USD for ACS members)*
J. Chemical Physics Lett. (ACS), IF = 6.585	4000 USD (2000 USD for ACS members)*
J Material Chemistry (RSC), IF = 6.101	1600 GBP
Electrochemical communications, IF = 4.950	2600 USD
Journal of physical chemistry C (ACS), IF = 4.814	4000 USD (2000 USD for ACS members)*
Applied Catalysis B, IF = 5.825	2500 USD + TAX
Electrochimica Acta IF=4..088	2600 USD
J. Power Sources IF=4.908	3300 USD+Tax
Advanced Energy Materials IF=10.043	3000 USD
Angewandte Chemie International Edition, IF = 13.734	3500 EUR
Nanotechnology, IF = 3.842	1950 EUR**
Journal of Physics D : Applied Physics, IF = 2.513	1950 EUR**





*All ACS authors may deposit their peer-reviewed manuscript, accepted for publication but prior to ACS' copy editing and production, to their funder, institutional, or governmental repository to comply with open access mandates.

** A **green open access** is defined for IoP Journals. There is free of charge but with restrictions :

Green open access refers to self-archiving an article in a subject or institutional repository. It is generally the author's final peer-reviewed version (the accepted manuscript before it is prepared for publication), not the published version. Articles are posted with an embargo of up to 24 months.

- **European Workshop on PEMFC for automotive applications**

The consortium is planning to host an European Workshop on PEMFC for automotive applications at the end of the project M42. Co-organisation with other automotive ongoing FCU-JU projects is planned.

- **Conference, seminars and workshops**

Consortium partners will participate to participate in conferences, seminars and workshops Interesting conferences and happenings could be: World Hydrogen Energy Conference, Grove Fuel Cell Symposium , Fuel cells Science & technology, f-cell, ACT "Alternative Clean Transportation" Expo, Electrochemical Society meetings

- **Press-releases**

Press releases of important results and findings will be sent to selected scientific journals.

- **Flyers, brochures and posters**

Flyers, brochures, posters and other outreach material will be created and distributed to collaborators and others on suitable occasions such as meetings, congresses, workshops etc.

2/ Exploitation Plan

The exploitation of the results by the SMARTCat consortium as a whole

Regular reports/feedback on potential applications of the results generated by the consortium will be made available to the partners. These reports may include:

- Estimate of the market potential
- Preliminary plan to promote the application of project results
- Feasibility of spin-off or start-up creations

Moreover, patents will be submitted following the procedure of the institution / country of the inventor with no delay when important results are generated. In case a partner within the consortium does not exploit a patent, targeted industrials will be contacted so as to enhance the industrial exploitation. In case an area is not patented, the consortium will define a period of time in which the results will be kept confidential. However, the consortium will make sure there is a balance between protected and public results. In addition, patent-protected results will be communicated using the publically available web site.

During the preparation of the proposal, the partners have already discussed the pre-existing knowledge, know-how and patents that each of them would be willing to give access to for other partners to carry out their share of work.



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Individual Partner Exploitation Plans

Beside the exploitation of the results by SMARTCat as a project, each one of the consortium partners has its own, distinct exploitation perspective.

CNRS – GREMI

GREMI expect to gain a world leading position in fuel cell electrode fabrication through the possibility for industrials to utilise our plasma sputtering technology. Generation of patents and publications valorising the conducted research.

CNRS - IC2MP

The knowledge and experiences gained along the project duration will lead to publications in international peer reviewing journal of high levels.

Original results will be submitted for patenting with the possibility of industrial exploitation.

SINTEF

For SINTEF the developments and gain in knowledge will increase their potential for further cooperation with industry and participation in new projects. As an example, with the resulting Intellectual Property Rights (IPR), knowledge and experience from SmartCat, SINTEF will be able to offer a more comprehensive set of services to industrial companies on a world wide scale within PEM fuel cell technology. This technology is in line with SINTEF's vision, which reads "Technology for a better society", and is thus a high priority area as part of SINTEF's internal strategy for the involved research group.

DTU

Experimental insight into the stability of the novel tri-metallic ORR catalysts and the non-carbon supports under operational conditions. The close integration between prediction and experimental validation of materials performance will enable us to incorporate efficient stability predictors directly in the materials design process. Possibility of publishing innovative results in international high-level peer reviewing journals

Mxpolymers

Gain extensive knowledge and expertise on MEA systems including the new electrode concept developed in the project.

Prove the concept of the new automated MEA manufacturing machine. This machine is intended as a starting point for later investments of larger machinery.

Develop a network with interested industrials for possible exploitation.

Submit world-leading patents on MEA manufacturing.

Assess the potentiality for the use of the new catalyst system for automotive applications.

