Institut Català d'Investigació Química

PRESS RELEASE

Tarragona, 20th February 2017.

Teflon subproducts recycled into valuable pharmaceuticals

A patent granted to ICIQ gives them exclusive rights to exploit this novel technology.

- Both the US and the EU patent offices granted ICIQ the exclusive exploitation rights of a new waste valorisation method.
- The process offers a sustainable alternative to the preparation of valuable pharmaceuticals (i.e. Prozac®) and agrochemicals from fluoroform, a sub-product obtained when preparing Teflon.
- Finding new uses for fluroroform is key to industry, as this toxic, halogenated compound has an important greenhouse effect and it's also hard to eliminate.
- ICIQ is now looking for industrial partners to licence this technology.

Fluoroform is highly pollutant, greenhouse effect chemical compound made of carbon and fluorine atoms. It is generated as one of the main waste products in the preparation of popular anti-adherent polymer Teflon. Eliminating fluoroform is expensive, mostly because it is a very good flame retardant, hence burning it is almost impossible.

Nevertheless, ICIQ researchers led by Prof. Vladimir Grushin saw in fluoroform a opportunity, a seam of cheap fluorinated compounds. Taking advantage of a product that is usually wasted, chemists developed a method to obtain organic compounds modified with fluorine atoms. These compounds can be used to prepare all sort of added-value products from drugs –like popular antidepressant Prozac® and several prostate cancer treatments– to agrochemicals and new materials.

Patent Offices from the US and the EU granted ICIQ the exclusive rights over this new synthesis method. Currently, ICIQ is looking for allies in the chemical and pharmaceutical industries to licence and exploit this new and original waste-valorisation technology.

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About the Institute of Chemical Research of Catalonia (ICIQ)

ICIQ is member of the *Barcelona Institute of Science and Technology* and one of the most prestigious chemistry research centres worldwide. 19 research groups work on catalysis (improvement and discovery of more efficient chemical reactions, sustainable processes and drug design) and renewable energy (water splitting, photovoltaics, transformation of CO_2 into fuels and materials). ICIQ is a Severo Ochoa Excellence Centre, has been awarded 14 European Research Council (ERC) grants and 9 of their researchers are ICREA professors.

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