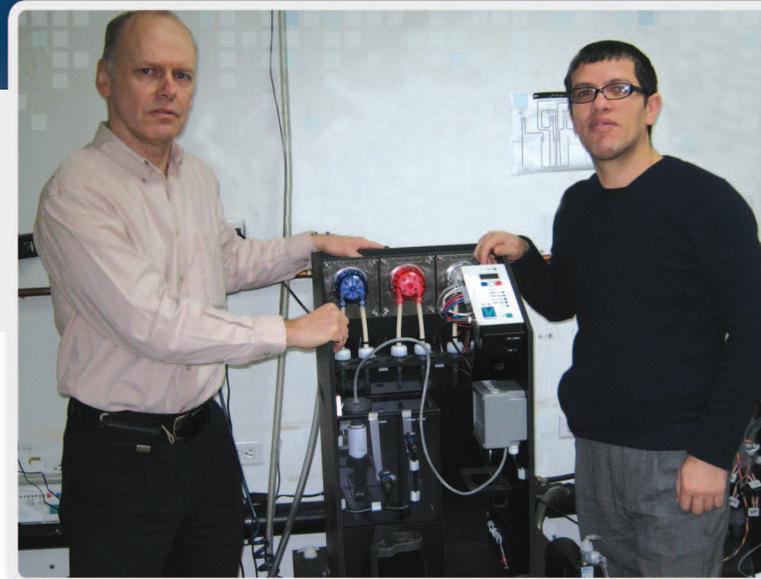


New Eco-friendly Technology for Chromium Recovery

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It is now possible to recover chromium from surface treatment industry effluents in a single step, thanks to a new technology developed by the Centre des technologies de l'eau (CTE) at Cégep de Saint-Laurent and Metafix.



Effective, simple and economic

The key feature of this system is its ability to precipitate the chromium in a single step, without the need for dangerous chemicals. Researchers at the **Centre des technologies de l'eau (CTE)** and Metafix found it could be done with iron filings. When effluents containing hexavalent chromium are put in contact with iron filings, the latter oxidize and release electrons, thus enabling the chromium to change directly into a solid under certain operating conditions.

This technique offers businesses a number of benefits, compared to other traditional technologies that require the transport, storage, handling and consumption of large quantities of chemicals, at great expense. Moreover, the new technology is less cumbersome, which means it saves a lot of space.



A productive partnership

Metafix had previously developed a similar system to recover silver from photo processing operations. Intrigued, the CTE contacted Metafix to propose that it adapt this technology for chromium recovery. In response, Metafix created a filter suitable for the metal in question.

All the research and development testing was done in Metafix facilities, under the supervision of engineer Denis Brunelle of Metafix and Aziz Gherrou, a CTE chemist and researcher. The innovative process created by CTE and Metafix required a year and a half of work and an investment of approximately \$100,000. A patent was filed for the process in December 2011. Mr. Gherrou is very optimistic that the patent will be granted. "There is no reason it should be refused," he notes. "The system should be patented within a year or 18 months, which is enough time for the CTE and Metafix to build the first pilot for operation on an industrial scale." □