

N°519 / PL

TOPIC(s) : Industrial chemistry

Challenges and Opportunities in Commercializing Green Chemistry Technologies from Academia

AUTHORS

Philip JESSOP / QUEEN'S UNIVERSITY, KINGSTON, 90 BADER LANE, KINGSTON, ONTARIO

PURPOSE OF THE ABSTRACT

The old model for commercialization of university technologies, via university-specific technology transfer offices (TTO's), is increasingly unable to surmount commercialization barriers. These barriers such as need for derisking, development, and scale-up before industry uptake, seem to have increased in recent decades as industry R&D bandwidth has decreased. Because professors and TTO's are ill-equipped to surmount these barriers, GreenCentre Canada was created in early 2009 as a government-supported non-profit commercialization centre to supply that capability to the universities or university-generated startups in a back-ended fee model that they could afford.

This lecture will present the commercialization barriers that GreenCentre was created to surmount, and then describe, with examples, the new pathways to commercialization that have been tested by the centre. These new pathways are not free of significant barriers themselves, so the Centre has found it necessary to modify its method of operation more than once. The remaining barriers and strategies to surmount them will be described, using examples from the portfolio of technologies that GreenCentre Canada has assisted. In addition, the opportunities that the new model creates and the drivers that motivate decision-making in the centre will be discussed.

The examples will include technologies from the speaker's own research lab at Queen's University. The influence of the 12 Principles of Green Chemistry on the invention and development of those technologies will be described.

FIGURES

FIGURE 1

FIGURE 2

KEYWORDS

startup company | commercialization | entrepreneur | technology transfer

BIBLIOGRAPHY