

'Current Frontiers in Cryobiology' Book Launched With Help From Planer

Submitted by: SMEketing

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Planer is pleased to announce the publication of what is set to be an industry leading book on cryopreservation, "Current Frontiers in Cryobiology". Steve Butler, Planer's Technical Director, and Professor David Pegg (<http://www.york.ac.uk/biology/staff/dep.htm>) of York University contributed a chapter in the book which, amongst other topics, explored the new technique of slow vitrification called Liquidus Tracking.

In the chapter Butler and Pegg discuss practical aspects of cryopreservation in general - mechanical and liquid nitrogen freezing as well as slow freezing, vitrification and a radically new method - slow vitrification. This new technique called Liquidus Tracking was developed to cope with samples that are unsuitable for preservation by conventional means such as controlled-rate freezing and ultra-fast vitrification. Controlled-rate freezing tackles the problem of inter-cellular ice and conventional vitrification inherently prevents the formation of ice, but it typically relies on ultra-fast cooling rates of around 20 000 oC/min - unachievable with large samples. By slowly increasing the concentration of cryoprotectant during the preservation process, the Liquidus Tracker prevents the formation of ice crystals within the samples, allowing vitrification without the necessity for fast cooling rates, so potentially permitting the vitrification of larger samples. Visit <http://planer.com/products/vitrification/liquidus-tracking.html> (<http://planer.com/products/vitrification/liquidus-tracking.html>) for more information on this technique.

The book has been published by InTech and contains a series of chapters on different aspects and trends in cryobiology and cryopreservation. InTech are one of the pioneers of open access publishing in the Science and Technology field and have collaborated with more than 60,000 authors on 12 journals and 1400 books since they were established in 2004.

The book is available in a hard copy version and also at <http://www.intechopen.com/books/current-frontiers-in-cryobiology/precision-in-cryopreservation-equipment-and-control> (<http://www.intechopen.com/books/current-frontiers-in-cryobiology/precision-in-cryopreservation-equipment-and-control>)

It is a global effort by scientists from 27 countries from all continents. Almost a decade has passed since the last major textbook on the science of cryobiology, Life in the Frozen State, was published. Recently, there have been some serious shifts in cryobiology that may have a profound effect on its future and the development of new cryopreservation methods and the aim is to introduce recently emerged practical protocols and new ideas in cryopreservation.

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About Planer

Specialising in the control of temperature and other parameters in the laboratory Planer helps customers achieve their scientific breakthroughs in biology, medicine and industry. Planer pioneered the development and use of many controlled temperature products as well as monitoring and logging of other

key parameters. They hold a number of patents, and have received the Queen's Award for Technology as well as awards from the DTI for Innovation and Good Practice in Microelectronics.

Contact Planer
Nick Pattenden
Planer PLC
110 Windmill Road
Sunbury-on-Thames
Middlesex
TW16 7HD
United Kingdom

Tel: +00 44 1932 755000

Email: sales@planer.com

Web: <http://www.planer.com> (<http://www.planer.com>)