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Lexo, the world's first naturally smart coffee/tea mug - A case of application of phase change materials in the consumer market

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A new generation of coffee/tea mugs, that utilizes phase change materials (PCM) to self-regulating the temperature of the drinks, have been developed and are now available in the market. In particular, created at the College of Engineering, University of Missouri, Lexo is the world's first temperature-modulating tumbler of this kind (e.g.: https://lexolife.com/). Lexo mugs utilize phase-change technology to turn hot coffee/tea into perfect drinking temperature in minutes and keep the beverage at that perfect temperature for hours. These "naturally smart" mugs introduce a totally new experience of coffee, tea, and other hot beverage drinking, enabling the consumers to enjoy a sip of perfect temperate coffee or tea wherever they are, for almost a whole-day long. Customer reviews on the new Lexo mugs, since they become available in late 2017, have been 100% five stars. Therefore, these types of mug have the potential to revolutionize the way coffee, tea, and other beverages are consumed and enjoyed worldwide. This paper presents the technical characteristics and potentials of such applications of phase change material in this particular consumer market.

Biography

Bin Wu is an Industrial Engineering Professor at the University of Missouri, and Director of the Missouri Industrial Assessment Center. He is an internationally-recognized expert in the design and management of manufacturing and supply systems, and has written a number of books on the subject that have been adopted as standard undergraduate and postgraduate texts worldwide. He is the recipient of numerous awards. His research has been funded by the Missouri Department of Natural Resources, the Kauffman Foundation, the US National Science Foundation and the US Department of Energy.

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