Requirements for Thermochemical Data in the Lighting Community

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This paper is dedicated to the memory of Klaus Hilpert.

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The need for thermochemical data in the lighting industry is reviewed; these data are required not only in the research and development phase but also throughout the product life cycle. This review has lead to: a summary of commercially available integrated thermochemical databanks; a bibliography of thermodynamic databases available in electronic format; a list of collections of thermodynamic data that are highly valuable but not available in electronic format; a bibliography for chemical systems of specific interest to research into high intensity discharge lamps. The bibliographies will be of interest to those involved in molten salts and ionic liquids research as well as to those seeking information on alloys, oxide systems and nuclear materials. A review of the current state of ab initio calculations for the determination of thermochemical parameters is also included.

Key words: Thermochemical Data; Light Sources; Molten Salts; Phase Diagrams.