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Sommario/riassunto

A multitude of useful physical and chemical processes promoted by ultrasonic cavitation have been described in laboratory studies. Industrial-scale implementation of the high-intensity ultrasound has, however, been hindered by several technological limitations, making it difficult to directly scale up the ultrasonic systems in order to transfer the results of the laboratory studies to the plant floor. High-capacity flow-through ultrasonic reactor systems required for commercial-scale processing of liquids can only be properly designed if the energy parameters of the cavitation region are correctly evaluated. Conditions which must be fulfilled to ensure an effective and continuous operation of an ultrasonic reactor system are provided in this book.