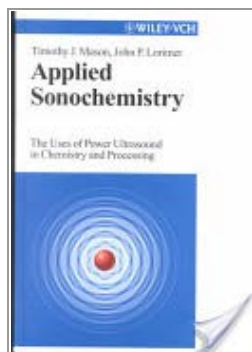




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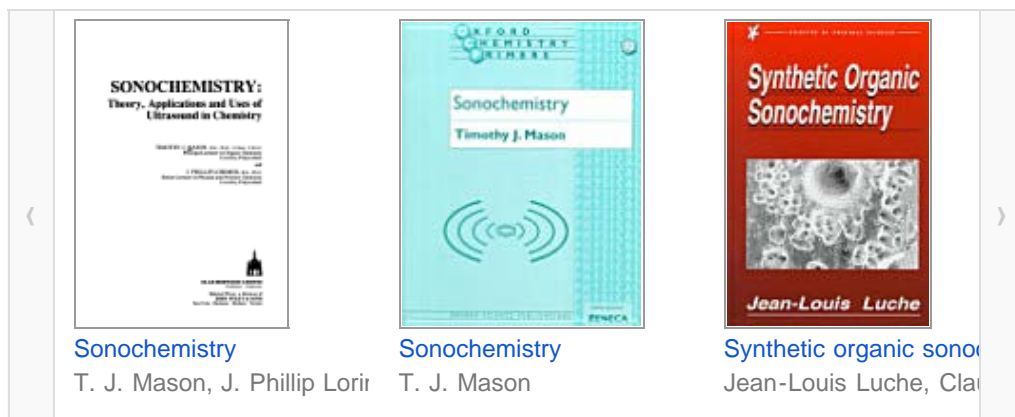
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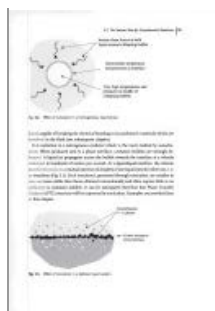
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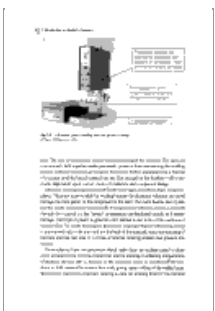
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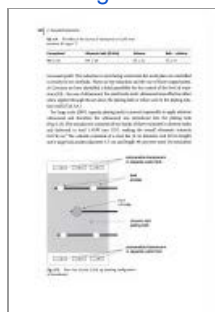
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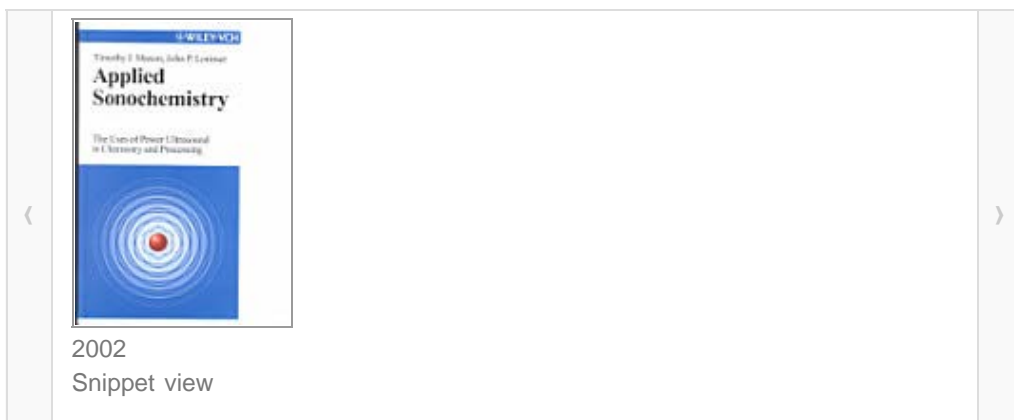


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cavitation bubbles cell Chem chemical chemistry cleaning bath concentration
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tion toluene transducer ultrasonic irradiation vapour pressure velocity vibration
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Popular passages

[Page 144](#) - The use of power ultrasound for surface cleaning is a long-established and efficient technology. Ultrasound is particularly effective in this type of decontamination because the cleaning action is induced by cavitation collapse on and near surfaces which will dislodge bacteria adhering to them. The particular advantage of ultrasonic cleaning in this context is that it can reach crevices that are not easily reached by conventional cleaning methods. Objects for cleaning can range from large crates...

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[Page 15](#) - Figure 1 shows a schematic gas driven atomiser. The system comprises of an air or gas jet which is forced into an orifice where it expands and produces a shock wave. The result is an intense field of sonic energy focused between the nozzle body and the resonator gap. When liquid is introduced into this region it is vigorously sheared into droplets by the acoustic field. Air by-passing the resonator carries the atomised droplets downstream in a fine soft plume shaped spray.

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[Page 144](#) - The particular advantage of ultrasonic cleaning in this context is that it can reach crevices which are not easily reached by conventional cleaning methods. Objects for cleaning can range from large crates used for food packaging and transportation to delicate surgical implements such as endoscopes. This was recognised some years ago, see for example a general patent that relates to the use of ultrasound as a method of pasteurisation, sterilisation and decontamination of instruments and surfaces...

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[Page 78](#) - On collapse, these vapours will be subjected to extremely large increases in temperature and pressure resulting in molecular fragmentation with generation of highly reactive radical species. Such radicals might then react either within the collapsing bubble or after migration into the bulk liquid...

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Page 126 - TJ Mason and JP Lorimer, Sonochemistry: Theory, Applications and Uses of Ultrasound in Chemistry, Ellis Horwood, Ltd., Chichester, UK, 1988.

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Timothy J. Mason is the director of the Sonochemistry Centre at the University of Coventry, in the United Kingdom. He is the coeditor of *Ultrasound in Food Processing*, the editor of *Sonochemistry. The Uses of Ultrasound in Chemistry*, and the author of *Sonochemistry*, *Advances in Sonochemistry*, and *Sonochemistry: Theory, Applications and Uses of Ultrasound in Chemistry*. **Dietmar Peters** is a reader in organic chemistry at the University of Rostock in Germany.

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