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**Raman Microspectroscopy in Chemical Imaging for Life Sciences and Pharmaceutics**  
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Raman microspectroscopy constitutes an elegant tool to study biological and other types of samples containing water and provides insights on molecular mechanisms of the processes occurring in the sample. The Raman spectrum of a molecule is unique, which makes it possible to identify the molecule in a mixture, or in biological tissue. With confocal Raman microscopy, it is possible to study materials and biological samples without using markers, and the resulting image has information about their chemical composition and conformational state of the molecules in every pixel of the image. For example, it is possible to image the location of nucleic acids inside the living cell, proteins, and lipids, distinguish between normal and cancerous cells, and monitor drug delivery to the cell. Raman microspectroscopy can be applied in studies for pharmaceutical products design, for screening to find optimal forms of the drug to optimize the early stages of drug development, as well as in mapping of the drug distribution in the pharmaceutical formulation or particles identification in chemistry. This talk is focused on the nature of the Raman effect and its applications in modern chemical and life sciences.