

Fiber optical system for on-line monitoring of industrial processes

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Abstract

We developed the fiber optical probes for mid-infrared range spectroscopy (2-18 microns). The suitability of using of fiber optical probes for the identification of substances by FTIR spectroscopy is demonstrated by studying the spectra of ink ballpoint pen and ink printer and determining of their application sequence. The principal possibility of using of fiber optical systems for control of industrial processes is presented. The studies of the chemical composition and electrolyte solution concentration in real time, using spectral analysis methods are also shown.