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Advances in the application of chemiluminescence detection in liquid chromatography

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Highlights

- An up-to-date review of applications of HPLC-CL is presented.
- Analysis of biologically active compounds and food characterization are considered
- Drugs of abuse and new designer drugs present great attention in forensic science
- New sample treatments, nanoparticles and multidimensional chromatography are included
- HPLC-CL applied in the speciation in inorganic pollutants.

Abstract

Chemiluminescence (CL)-based detection has lately become a quite useful detection system in liquid chromatography (HPLC) due to its simplicity, low cost, high sensitivity and high selectivity. Some strategies such as the use of photochemically induced CL reactions, the application of nanoparticles and new sample treatments have been combined with either the well-known CL reactions based on the use of luminol, tris(2,2-bipyridine) ruthenium (II) and peroxyoxalate as CL precursors, or direct oxidations. This review presents some important contributions published during the last five years.

Keywords: liquid chromatography, chemiluminescence, pharmaceutical analysis, environmental analysis, food analysis

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