

Provisional Recommendations

IUPAC seeks your comments

In this section we publish synopses of IUPAC's latest provisional recommendations on nomenclature and symbols. All comments on these recommendations are welcome and will be taken into consideration. The final revised versions are published in *Pure and Applied Chemistry* and synopses of these are published in *Chemistry International* as recent reports.

If you would like to comment on the provisional recommendations please write to your nearest national/regional centre requesting a copy of the full report. Copies are not available from the IUPAC Secretariat. The most recent list of the national/regional centres appeared in *Chemistry International* 1997, **17**, 141.

Nomenclature, symbols, units and their usage in spectrochemical analysis— XVII. Laser-based molecular spectrometry for chemical analysis: absorption

(Prepared by G. Gauglitz & D.S. Moore)

This document, part XVII of this series, deals with the fundamentals and applications of laser absorption

spectroscopy used in laser-based molecular spectroscopy for chemical analysis. It has four main sections: fundamentals of laser absorption spectroscopy, Doppler-limited spectroscopy, sub-Doppler laser spectroscopy, and time-resolved laser spectroscopy.

Basic aspects of spectral resolution limited by the Doppler width of molecular absorption are treated, application of single mode or multi-mode lasers is discussed, approaches to high-resolution sub-Doppler laser spectroscopy are given, and applications are discussed.

This document does not cover laser-induced effects causing luminescence, which are covered in Part XVI [*Pure Appl. Chem.* 1997, **69**(7), 1435–1449], or scattering processes covered in Part XVIII [*Pure Appl. Chem.* 1997, **69**(7), 1481–1468]. Some relevant common terms have already been defined in Part XVI and are not redefined in this document.

Comments on these recommendations are welcome and should be sent by 1 September 1998 to: Dr D.S. Moore, Group DX-2, Mail Stop C920, Los Alamos National Laboratory, Los Alamos, NM 87545 USA, Fax: +1 (505) 667 0500, e-mail: moored@lanl.gov