

Gas Chromatography

1. REVIEWS AND BOOKS

- 1812 Bente, B., Lendero, L. and Rothman, T.: A significant advance in gas chromatography. *Am. Lab. (Shelton)*, 27 (1995) 47C-47H.
- 1813 Brettell, T.A. and Saferstein, R.: Forensic science. *Anal. Chem.*, 67 (1995) 273R-294R.
- 1814 Grob, K.: *Einspritztechniken in der Kapilar-Gaschromatographie*. Hüthig, Heidelberg, 1995, 465 p.
- 1815 Rood, D.: *A Practical Guide to the Care, Maintenance, and Troubleshooting of Capillary Gas Chromatographic Systems*. Hüthig, Heidelberg, 1995, 323 p.
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See also 1824, 1850, 1861, 1866, 1870, 1879, 1893, 1899, 1900, 1905, 1914, 1916, 1918, 1920, 1931, 1933, 1937, 1966, 2090, 2193, 2202, 2222, 2231.

2. FUNDAMENTALS, THEORY AND GENERAL

2a. General

- 1817 Davis, J.M.: Calculation of statistical attributes in small regions of separations: variation of overlap probability along the separation coordinate. *J. Microcolumn Sep.*, 7 (1995) 3-15.
- 1818 Felinger, A.: Superposition of chromatographic retention patterns. *Anal. Chem.*, 67 (1995) 2078-2087.
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- 1823 Shi, J. and Fang, H.: (Selecting typical demonstration experiments to make better classroom instructions for analytical instrumentation.) *Daxue Huaxue*, 9 (1994) 45-55; C.A., 122 (1995) 238787z.
- 1824 Tong, D., Bartle, K.D. and Clifford, A.A.: Principles and applications of unified chromatography. *J. Chromatogr. A*, 703 (1995) 17-35 - a review with 90 refs.

2b. Thermodynamics and theoretical relationships

- 1825 Reddy, K.S., Cloux, R. and Kováts, E. sz.: Pair-wise interactions by gas chromatography VI. Interaction free enthalpies of solutes with primary methoxyalkane, cyanoalkane and alkanethiol groups. *J. Chromatogr. A*, 704 (1995) 387-436.

See also 2198.

2c. Relationship between structure and chromatographic behaviour

- 1826 Li, Z.-L., Yaegashi, O., Liang, B.-X. and Shi, L.-M.: (Neural networks used in chromatography. (I). Prediction of GC retention parameters.) *Gaojing Xuejiao Huaxue Xuebao*, 15 (1994) 1775-1777; C.A., 122 (1995) 305538j.

See also 1938, 1947, 1964, 1967, 2005, 2006, 2024.

2d. Measurement of physico-chemical and related values

- 1827 Castells, R.C. and Castells, C.B.: Infinite dilution activity coefficients of hydrocarbons in tetra-*n*-alkyltin solvents between 40 and 60 °C measured by gas-liquid chromatography. *J. Solution Chem.*, 24 (1995) 285-300; C.A., 122 (1995) 249401v.
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- 1837 Xu, Z., Yang, J. and Pang, S.: Determination of the degree of cyclization of cyclized *cis*-1,4-polybutadiene by pyrolysis gas chromatography. *Fenxi Huaxue*, 22 (1994) 194-196; C.A., 122 (1995) 266495w.

See also 2197.

3. GENERAL TECHNIQUES

3a. Apparatus and accessories

- 1838 Adachi, H. and Tateishi, K.: (Volatile components trap for gas chromatographic analysis.) *Jpn. Kokai Tokkyo Koho* JP 07 55,781 [95 55,781] (Cl. G01N30/12), 03 Mar. 1995, Appl. 93/200,846, 12 Aug. 1993; 3 pp.; C.A., 122 (1995) 329574u.
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- 1843 Ito, M., Koike, Y. and Inoe, S.: (Exhaust gas concentrating apparatus and use in exhaust gas automatic analysis.) *Jpn. Kokai Tokkyo Koho* JP 07 31,801 [95 31,801] (Cl. B01D8/00), 03 Feb. 1995, Appl. 93/178,170, 19 Jul. 1993; 15 pp.; C.A., 123 (1995) 39965b.
- 1844 Kimijima, T.: (Column holder and lead pipe for gas chromatographic capillary column.) *Jpn. Kokai Tokkyo Koho* JP 07 35,737 [95 35,737] (Cl. G01N30/60), 07 Feb. 1995, Appl. 93/224,044, 20 Jul. 1993; 4 pp.; C.A., 122 (1995) 255093n.
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- See also 1814, 1887, 1889, 1900, 1902, 1913, 1917, 1919, 1990, 2109, 2211, 2249, 2273.
- 3b. Detectors and detection reagents
- 1858 Criddle, W.J., Hansen, N.R.S. and Jones, D.: Fuel cell detector for gas chromatography. *Analyst (Cambridge)*, 120 (1995) 1639-1642.
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- 1866 Uden, P.: Element-specific chromatographic detection by atomic absorption, plasma atomic emission and plasma mass spectrometry. *J. Chromatogr. A.*, 703 (1995) 393-416 - a review with 108 refs.
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- See also 1824.
- 3c. *Sorbents and columns, packing procedures*
- 1869 Akopova, O.B., Vetrova, Z.P., Ivanova, L.A. and Karabanov, N.T.: (High-efficiency liquid-crystal fixed phase for gas chromatography.) *Russ. RU* 2,019,828 (Cl. G01N30/48), 15 Sep. 1994, SU Appl. 5,030,631, 30 Jul. 1991; *C.A.*, 123 (1995) 47075b.
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See also 1907, 1908, 1930, 1954, 1969, 2026, 2164.

3d. Quantitative analysis

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- 1888 Pires Valente, A.L., Augusto, F. and Carasek da Rocha, E.: Chromatographic quantitation using fractions of the peak areas. *J. High Resolut. Chromatogr.*, 18 (1995) 315-317.

See also 1894, 1958, 2004, 2136.

3e. Preparative scale chromatography

- 1889 Buckley, T.J. and Gillis, K.A.: All-metal collection system for preparative-scale gas chromatography. Purification of low-boiling-point compounds. *J. Chromatogr. A*, 702 (1995) 243-250.
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See also 1915, 1920, 1921, 2022.

3f. Programmed temperature, pressure, vapors, gradients

- 1891 Blumberg, L.M., Berger, T.A. and Klee, M.: Constant flow versus constant pressure in a temperature-programmed gas chromatograph. *J. High Resolut. Chromatogr.*, 18 (1995) 378-380.
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See also 1938, 1962, 2305.

4 SPECIAL TECHNIQUES

4a. Automation

- 1893 Blasser, W.W., Bredeweg, R.A., Harner, R.S., Lapack, M.A., Leugers, A., Martin, D.P., Pell, R.J., Workman, J., Jr. and Wright, L.G.: Process analytical chemistry. *Anal. Chem.*, 67 (1995) 47R-70R.
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See also 1839, 1843, 1851.

4b. Computerization and modelling

- 1895 Chen, F., Li, Z., Yu, W., Liu, T. and Huang, Q.: (Processing of chromatograms and data from C-R6A processor by personal computer.) *Chin. J. Chromatogr.*, 13 (1995) 225-226.

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See also 1821, 1962, 2052.

4c. Combination with other physico-chemical techniques (MS, IR etc.)

- 1898 Albert, K., Braumann, U., Streck, R., Spraul, M. and Ecker, R.: Application of direct on-line coupling of HPLC and SFC with ¹H NMR spectroscopy for the investigation of monomeric acrylates. *Fresenius J. Anal. Chem.*, 352 (1995) 521-528.

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See also 1816, 1820, 1861, 1914, 1925, 1926, 1932, 2088, 2137, 2217, 2300.

4e. Functional analysis

- 1903 Wells, R.J. and Amijee, M.: New methylation reagents for direct on column derivatization. *Chem. Aust.*, 61 (1994) 390-391; *C.A.*, 122 (1995) 255018s.

See also 1825, 1892, 2095.

4f. Trace analysis and preseparation techniques

- 1904 Kalb, B.: Quantitative trace analysis of volatile organic compounds in air, water and soil using equilibrium headspace gas chromatography. *LG-GC Int.*, 8 (1995) 512-524.

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See also 1848, 1879, 1951, 1968, 1970.

4g. Enantiomers, separation

- 1906 Bojarski, J.: (Chromatographic resolution of enantiomers I. Methods.) *Wiad. Chem.*, 47 (1993) 279-297; C.A., 122 (1995) 280986p - a review with 309 refs.
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See also 1873, 2042, 2071, 2102, 2105, 2134.

4h. Other special techniques

- 1909 Abbott, D.J.: Advances in simulated distillation. In: Adlard, E.R. (Editor), *Chromatography in the Petroleum Chemistry*, 56, 1995, pp. 41-53; C.A., 122 (1995) 318118x - a review with 37 refs.
- 1910 Zhao, Z., Fan, W., Yang, W., Mo, W., Li, Z., Qin, Z., Yand, Y. and Zhao, L.: (Development of online gas-thermo-chromatographic separation equipment.) *Yu Fangshe Huaxue*, 16 (1994) 244-248; C.A., 122 (1995) 250228a.
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See also 2300.

4i. Supercritical fluid chromatography

- 1912 Abbassi, B.E., Mestdagh, H. and Rolando, C.: Automatic extraction of relevant peaks and reconstruction of mass spectra for low signal-to-noise GC-MS data. *Int. J. Mass Spectrom. Ion Processes*, 141 (1995) 171-186; C.A., 122 (1995) 329515a.
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- 1914 Arpino, P.J. and Haas, P.: Recent development in supercritical fluid chromatography-mass spectrometry coupling. *J. Chromatogr. A*, 703 (1995) 479-488 - a review with 43 refs.
- 1915 Bevan, C.D. and Mellish, C.I.: Scaling-up of supercritical fluid chromatography to large-scale applications. In: Subramanian, G. (Editor), *Process Scale Liq. Chromatogr.*, VCH, Weinheim, 1995, pp. 163-191; C.A., 122 (1995) 294136y - a review with 40 refs.
- 1916 Bøwadt, S. and Hawthorne, S.B.: Supercritical fluid extraction in environmental analysis. *J. Chromatogr. A*, 703 (1995) 549-571 - a review with 108 refs.
- 1917 Görner, T., Fuchs, G. and Perrut, M.: A simple device for preparation of low concentration binary mobile phases in SFC. *J. Supercrit. Fluids*, 8 (1995) 66-70.
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5. HYDROCARBONS AND HALOGEN DERIVATIVES

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See also 1827, 1872, 1881, 2064.

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See also 1848, 1871, 2281, 2309.

6. ALCOHOLS

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See also 2008, 2023.

7. PHENOLS

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8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

8a. Flavonoids

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See also 1978.

9. OXO COMPOUNDS, ETHERS, EPOXIDES AND QUINONES

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10. CARBOHYDRATES

10a. Mono and oligosaccharides. Structural studies

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See also 1841, 2021.

10b. Polysaccharides, mucopolysaccharides, lipopolysaccharides

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- 11. ORGANIC ACIDS AND LIPIDS**
- #### 11a. Organic acids and simple esters
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