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	Descrizione fisica	1 online resource (634 p.)
	Altri autori (Persone)	PearceT. C (Tim C.)
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	Soggetti	Chemical detectors
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	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Introduction to olfaction: perception, anatomy, physiology, and molecular biology / Susan S. Schiffman, Tim C. Pearce -- Chemical sensing in humans and machines / J. Enrique Cometto-Munoz -- Odor handling and delivery systems / Takamichi Nakamoto -- Introduction to chemosensors / H. Nanto, J.R. Stetter -- Signal conditioning and preprocessing / R. Gutierrez-Osuna [et al.] -- Pattern analysis for electronic noses / Evor L. Hines [et al.] -- Commercial electronic nose instruments / E. Vanneste, H.J. Geise -- Optical electronic noses / Todd A. Dickinson, David R. Walt -- Hand-held and palm-top chemical microsensor systems for gas analysis / A. Hierlemann, U. Weimar, and H. Baltes -- Integrated electronic noses and microsystems for chemical analysis / Julian W. Gardner, Marina Cole -- Electronic tongues and combinations of artificial senses / F. Winquist, C. Krantz-Rulcker, I. Lundstrom -- Dynamic pattern recognition methods and system identification / E. Llobet -- Drift compensation, standards, and calibration methods / M. Holmberg and T. Artursson -- Chemical

sensor array optimization: geometric and information theoretic approaches / Tim C. Pearce, Manuel A. Sanchez-Montanes -- Correlating electronic nose and sensory panel data / Robert W. Sneath, Krishna C. Persaud -- Machine olfaction for mobile robots / Hiroshi Ishida and Toyosaka Moriizumi -- Environmental monitoring / H. Troy Nagle [et al.] -- Medical diagnostics and health monitoring / Krishna C. Persaud, Anna Maria Pisanelli, Phillip Evans -- Recognition of natural products / Olivia Deffenderfer, Saskia Feast, Francois-Xavier Garneau -- Process monitoring / Thomas Bachinger and John-Erik Haugen -- Food and beverage quality assurance / Corrado Di Natale, Roberto Paolesse, Arnaldo D'Amico -- Automotive and aerospace applications / M.A. Ryan, H. Zhou -- Detection of explosives / Vamsee K. Pamula -- Cosmetics and fragrances / P.A. Rodriguez, T.T. Tan and H. Gygax.

| Sommario/riassunto | ""Electronic noses"" are instruments which mimic the sense of smell. Consisting of olfactory sensors and a suitable signal processing unit, they are able to detect and distinguish odors precisely and at low cost. This makes them very useful for a remarkable variety of applications in the food and pharmaceutical industry, in environmental control or clinical diagnostics and more. The scope covers biological and technical fundamentals and up-to-date research. Contributions by renowned international scientists as well as application-oriented news from successful ""e-nose"" manufacturers give a |