

Chemical Sensors

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A. INTRODUCTION

We have retained the format of the previous reviews in this series (A1-A3) with only some small changes; Because of the growth of the number of entries in the raw database by 45%, the selection of references included in this review was more stringent than that in the previous years. The computerized search of the Chemical Abstracts database was performed with the same search keywords and strings, using the same rules. Therefore, the numbers in Table 1 for individual categories of sensors represent the total number of entries in the database and can be used for comparison and estimate of trends. A number in the % column shows the percentage of the papers for that type of sensor in the total database. The percent change is referred to the percentage of any type of sensor that was reported in the previous review (A3). According to the new rules governing the Fundamental Reviews issue, the search period extends from 1 January 1992 to 1 November 1993. This period is by two months shorter than that for the previous review. Therefore the actual total percentage increase is 49% and the individual trend estimates should be adjusted accordingly.

As before, only the articles published in English are included. The only exception is the category of reviews which contains multilingual entries. The inclusion of the *Chemical Abstracts* citations should help with the access to the information in less common journals and reports.

Given the large number of references in the raw database it was not possible for us to study the actual content of the original source. From that point of view the inclusion or exclusion of a reference in this review does not imply endorsement or rejection of that work by the authors. The

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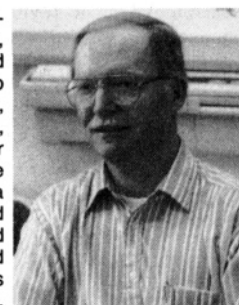


Table 1

topic	average no.			% of total ^a	% change
	1985-1989	1990-1991	1992-1993		
review	78	145	347	24.9	+9.1
thermal	6	15	12	0.9	-0.6
mass	21	40	126	9.0	+5.9
potentiometric	419	309	260	18.7	-13.4
amperometric	96	210	208	15.0	-6.8
conductimetric	66	101	126	9.1	-1.4
optical	62	142	312	22.4	+7.7
totals	668/year	962/year	1391/year		+45

^a From 1992 to 1993.

entire review is an exercise in categorization and classification of the sensing literature. Comments, identification of trends, and personal observations of the authors are more or less confined to the Conclusions.

Books and Reviews. This category experienced the largest percentage increase. There are now several book series devoted to chemical sensors. They are multiauthored and cover the