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Gaseous detectors for energy dispersive X-ray fluorescence analysis

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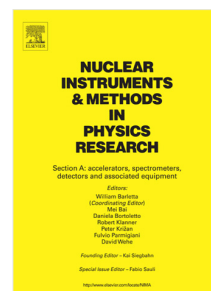
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1 Gaseous detectors for energy dispersive X-ray
2 fluorescence analysis

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5 **Abstract**

6 The energy resolution capability of gaseous detectors is being used in the last
7 years to perform studies on the detection of characteristic X-ray lines emitted by
8 elements when excited by external radiation sources. One of the most success-
9 ful techniques is the Energy Dispersive X-ray Fluorescence (EDXRF) analysis.
10 Recent developments in the new generation of micropatterned gaseous detectors
11 (MPGDs), triggered the possibility not only of recording the photon energy, but
12 also of providing position information, extending their application to EDXRF
13 imaging. The relevant features and strategies to be applied in gaseous detectors
14 in order to better fit the requirements for EDXRF imaging will be reviewed and
15 discussed, and some application examples will be presented.

16 *Keywords:* gaseous detectors, MPGD, EDXRF, XRF, X-ray imaging

17 **Contents**

18	1 Introduction	2
19	2 Gaseous detectors properties for energy resolved X-ray fluores-	
20	cence	3
21	2.1 Filling gas	3
22	2.2 Detection efficiency	4
23	2.3 Energy resolution	5
24	2.4 Position resolution for X-rays	9
25	2.5 Energy linearity	11

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