



Fluorescence Correlation Spectroscopy

By Rigler, R. / Elson, E. S.

Book Condition: New. Publisher/Verlag: Springer, Berlin | Theory and Applications | This is the first book-length treatment of both the theoretical background to fluorescence correlation spectroscopy (FCS) and a variety of applications in various fields of science. The high spatial and temporal resolution of FCS has made it a powerful tool for the analysis of molecular interactions and kinetics, transport properties due to thermal motion, and flow. It contains an essential contribution from Nobel Prize winner M. Eigen, who is credited with inventing FCS. | 1. Introduction.- References.- 1 FCS in the Analysis of Molecular Interactions.- 2 Fluorescence Correlation Spectroscopy of Flavins and Flavoproteins.- 2.1 Introduction.- 2.2 Materials and Methods.- 2.3 Results and Discussion.- 2.3.1 FCS on FMN and FAD.- 2.3.2 FCS on YFP and BFP.- 2.4 Conclusions.- References.- 3 Fluorescence Correlation Spectroscopy in Nucleic Acid Analysis.- 3.1 Introduction.- 3.2 Oligonucleotide-Target Interactions.- 3.3 DNA Analysis by "Going Micro".- 3.4 Incorporation of Dye Nucleotides into DNA.- 3.4.1 Low-Density Labeling.- 3.4.2 Nick Translation.- 3.4.3 Linear Primer Extension Reactions.- 3.4.4 High-Density Labeling.- 3.5 Exonuclease Degradation.- 3.6 Restriction Enzyme Cutting and DNA Sizing.- 3.7 Polymerase Chain Reaction.- 3.7.1 FCS Autocorrelation Analysis: New Detection Methods.- 3.7.2 FCS Cross-Correlation Analysis: A New Concept for PCR.- 3.8...



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