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## Bacterial Sensors: Synthetic Design and Application Principles (Paperback)

By van der Jan Roelof Meer

Morgan Claypool Publishers, United States, 2011. Paperback. Book Condition: New. 232 x 190 mm. Language: English . Brand New Book. Bacterial reporters are live, genetically engineered cells with promising application in bioanalytics. They contain genetic circuitry to produce a cellular sensing element, which detects the target compound and relays the detection to specific synthesis of so-called reporter proteins (the presence or activity of which is easy to quantify). Bioassays with bacterial reporters are a useful complement to chemical analytics because they measure biological responses rather than total chemical concentrations. Simple bacterial reporter assays may also replace more costly chemical methods as a first line sample analysis technique. Recent promising developments integrate bacterial reporter cells with microsystems to produce bacterial biosensors. This lecture presents an in-depth treatment of the synthetic biological design principles of bacterial reporters, the engineering of which started as simple recombinant DNA puzzles, but has now become a more rational approach of choosing and combining sensing, controlling and reporting DNA parts . Several examples of existing bacterial reporter designs and their genetic circuitry will be illustrated. Besides the design principles, the lecture also focuses on the application principles of bacterial reporter assays. A variety of assay formats will...



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### Reviews

*This publication may be really worth a go through, and a lot better than other. It really is written in simple terms and never difficult to understand. Once you begin to read the book, it is extremely difficult to leave it before concluding.*

-- Natalie Abbott

*This book will not be simple to get going on reading but extremely exciting to read through. Yes, it can be playful, still an interesting and amazing literature. I am very easily could possibly get a delight of reading a written book.*

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