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Autore	Jamalipour Abbas
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Nota di contenuto	1 Introduction -- 2 Smartphone intensity fluorimeters -- 3 Temperature tunable smartphone intensity fluorimeter -- 4 Smartphone spectrometers -- 5 Optical fiber smartphone spectrometers.
Sommario/riassunto	A significant and convenient approach to detection and analysis of biological, environmental and agricultural items is the harnessing of features in widely available smartphones to create field-deployable scientific instruments, allowing measurements to be made onsite and in real-time. This book will cover a number of self-contained

smartphone instruments with the particular focus on spectroscopic-based measurements. Measurement and analysis on precision of such low-cost instrumentations are provided to compare with more expensive commercial equipment. This book also discusses some limitations, possible recommendations and scopes for further instrumentations using smartphones and other smart devices. Particularly, the opportunity to integrate the devices into the global Internet-of-Things (IoT) platform will be discussed. Researchers and instrumentation designers in optical and photonic sensing, smart and IoT-based sensing, biological and environmental analysts, agricultural, and food quality researchers (and public health authorities) will find this book useful as reference. Students in science and engineering disciplines for teaching and educational purposes will also find this book useful as a secondary textbook.