

Current Status of Noninvasive Bioinstrumentation for Healthcare

Ken-ichi Yamakoshi*

Graduate School of Natural Science and Technology, Kanazawa University
Kakuma, Kanazawa 920-1192, Japan

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In the so-called “super-aging society,” noninvasive healthcare monitoring has been increasingly required as a possible scheme for preventive medicine, early diagnosis, and timely treatment of lifestyle-related diseases. As contributions towards the development of the most desirable aim of achieving ubiquitous healthcare monitoring, two promising systems, “ambulatory or wearable physiological monitoring” and “nonconscious physiological monitoring,” which have recently been developed through modern technological advances, are introduced in this paper. Each of these two monitoring techniques appears to have the potential to contribute to the fields of personal healthcare, medical care, and rehabilitation among others. Nevertheless, further comprehensive studies will still be required to realize this potential and thereby achieve an advanced and truly practical approach. This is also discussed in this paper.

*Corresponding author: e-mail: yamakoshi@t.kanazawa-u.ac.jp