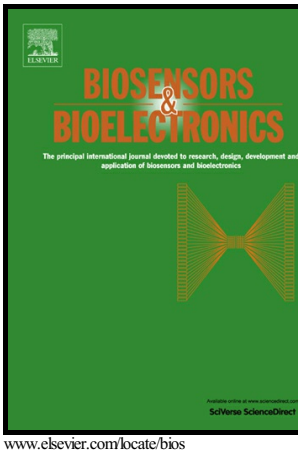

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Application of Photonic Crystal Enhanced Fluorescence to Detection of Low Serum Concentrations of Human IgE Antibodies Specific for a Purified Cat Allergen (Fel d1)

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Abstract

We demonstrate the detection of low concentrations of allergen-specific Immunoglobulin E (IgE) in human sera using a Photonic Crystal Enhanced Fluorescence (PCEF) microarray platform. The Photonic Crystal (PC) surface, designed to provide optical resonances for the excitation wavelength and emission wavelength of Cy5, was used to amplify the fluorescence signal intensity measured from a multiplexed allergen microarray. Surface-based sandwich immunoassays were used to detect and