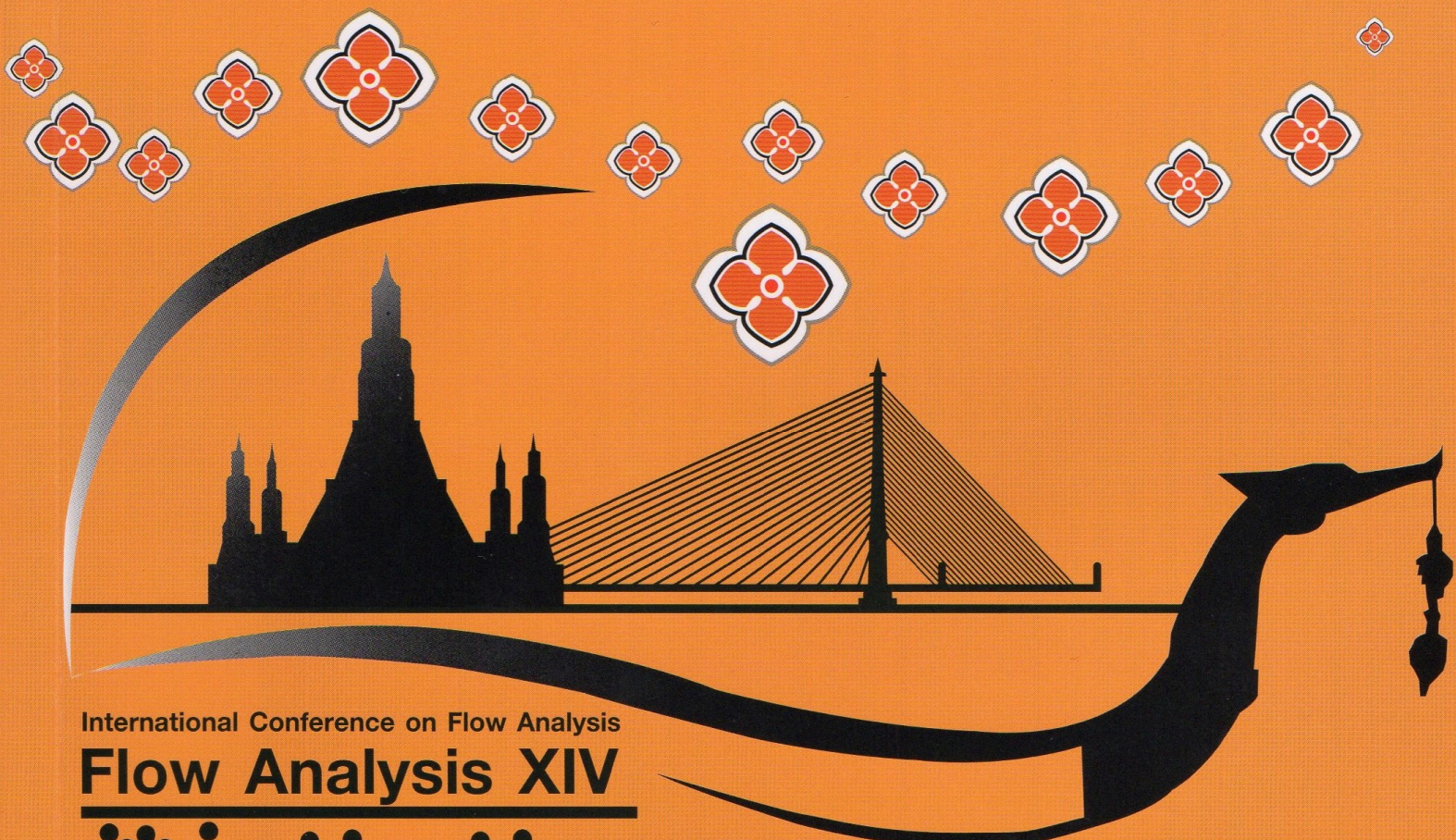


Abstract book

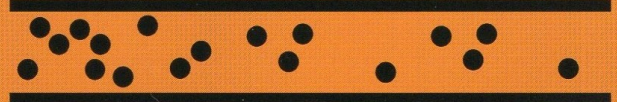
วิธีวิเคราะห์สมัยใหม่ biological 2018 Excursion Gas diffusion
FIA μ PAD อาหาร GC MBLVP
CE 14th การวิเคราะห์
SIA quantitative ตัวอย่าง
SIEMA การเตรียมตัวอย่าง analysis
MSFIA ๑๔
Sample สเปกโทรสโกปี SIA CIA spectroscopy
Electrochemistry ๒๐๑๘ สิ่งแวดล้อม เคมีไฟฟ้า

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Exploring specially designed solid interfaces for improved detection platforms in flow and micro-flow analysis

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Abstract

The use of solid materials combined with flow analysis methods has been a successful approach to handle complex samples analysis. In fact, tackling sample pre-treatment in-line is a major advantage of flow methods for application to samples like dynamic water systems and biological samples. Different solid interfaces have been used for sample clean-up by retaining/separating potential interferences, or analyte pre-concentration by retaining/separating the target compound. Furthermore, these solid interfaces can play an active role, namely functionalized resins and polymer inclusions membranes, or a passive role, namely hydrophobic and hydrophilic membranes. By exploiting functionalization, a step forward can be achieved by adding additional features, like detection capability. In this context, some potential applications were studied using the concept of functionalizing solid materials with colorimetric indicators. Among these, the determination of iron in foods, water and serum using a sequential injection lab-on-valve method with an indicator resin, and a polymer inclusion membrane-based analytical device for wounds monitoring, will be discussed. Advantages and limitations of these approaches will also be addressed.

Keywords: Functionalized solid phases, Flow methods, Dynamic water systems, Biological samples

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