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His research interest addresses the development of reagentless amperometric biosensors with improved electron-transfer characteristics, micro-electrochemistry, miniaturization of biosensors, scanning electrochemical microscopy, miniaturized assays, fuel cells, biofuel cells, Li batteries, photoelectrochemistry, noble-metal free electrocatalysts and combinatorial electrochemistry.

Prof. Schuhmann is member on the Editorial Boards of a number of major international journals such as "Biosensors & Bioelectronics", "Electroanalysis", "Microchimica Acta", "ChemPlusChem" and has served as Chair of Division 2 "Bioelectrochemistry" of the International Society of Electrochemistry (2007–2008).

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