

SEMINAR

The State Key Lab of High Performance Ceramics and Superfine
Microstructure, Shanghai Institute of Ceramics, Chinese Academy of Sciences
中国科学院上海硅酸盐研究所高性能陶瓷和超微结构
国家重点实验室

2024 年度国家重点实验室特邀学术报告

Integrated Sensors for the Applications in Medicine and Multicomponent Analysis

Professor Alexey Vasiliev

Kurchatov complex of chemical and physical technology

NRC Kurchatov Institute, Russia

时间：2024 年 5 月 6 日（星期一）上午 9:30-11:00

地点：嘉定园区 F7 第二会议室

欢迎广大科研人员和研究生参与讨论！

联系人：刘志甫（69906595）

报告摘要:

In this talk, the gas sensing process with semiconductor and thermocatalytic metal oxide gas sensors and with possible application of these gas sensors for the development of smart system usable for the application in medicine will be considered. Firstly, the principles of the operation of semiconductor and thermocatalytic gas sensors, and the requirements to the materials usable for the sensing layers of gas sensors will be introduced. Possible microelectronic implementations of gas sensors, including silicon and ceramic MEMS, the requirements to the materials of the MEMS structures will be discussed. Some approaches to the multicomponent gas analysis with gas sensors (single sensor analysis with a sensor operating in temperature excitation mode, multisensory analysis) were applied and compared. The last results on sensors for breath analysis and the analysis of smell of biological liquids for the diagnostics of human diseases will be presented.

报告人简介:

亚力山克斯·瓦西列夫 (Alexey Vasiliev), 博士, 俄罗斯国家研究中心库恰托夫研究所教授, 实验室负责人。曾获前苏联国家青年科学家奖 (USSR State Prize) (1986 年)、库恰托夫奖 (Kurchatov Prize) (2000 年)。瓦西列夫教授是含氟气体微集成传感器领域的专家, 他长期致力于集成气体传感器、气体敏感机理的研究, 在气敏响应动力学、MEIS 型集成传感器、MEMS 集成传感器等方面都做出了有独创性的工作, 发表研究论文 300 余篇; 他是“Eurosensors”系列会议的“Steering committee”成员、俄罗斯科学院分析化学委员会 (Analytical Chemistry Council) 成员。

