



Special issue on selected papers from EMRS: Carrier transport, photonics and sensing

Arie Ruzin¹

Published online: 6 January 2020
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European Material Research Society (EMRS) conducts annual international conferences which consist of numerous symposia for presenting the recent research and development results in Materials Science. In EMRS2018 Spring Meeting, Symposium G was titled Carrier transport, photonics and sensing in group IV-based and other semiconductors nano devices. This symposium had 10 invited speakers and more than 120 participants from all over the world.

The symposium brought together leading scientists from around the world that presented the novel technological and scientific developments in a wide spectrum, starting with material synthesis, material characterization, device design and fabrication, and finally, device characterization and modeling of electronics, photonics and sensors.

These topics have attracted an increasing attention in the recent years for various applications, including infrared

communication and imaging. The critical issues are therefore carrier transport properties and lifetimes which was reflected in the symposium program.

The photonic devices of particular interest are detectors, light emitting sources, waveguides, optical modulators and CMOS devices. The symposium scope covered also defect engineering and characterization; study of the impact of crystal quality on the properties of electronic and photonic devices; and integration of CMOS-compatible biological and chemical sensing systems into VLSI technology.

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✉ Arie Ruzin
ruzin@tauex.tau.ac.il

¹ Faculty of Engineering, Tel Aviv University, 69978 Tel Aviv, Israel