



First Name, Family Name **Julien BRAULT**

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CV/ biography

Julien Brault is a research director at the French National Centre for Scientific Research (CNRS). He specializes in the fabrication of semiconductor materials by epitaxial growth. At the beginning of his career, he worked on: indium arsenides and phosphides (InAs-InP system) for 1.55- μ m telecom applications; gallium nitride and aluminum nitride lasers (GaN-AlN system) for applications in spectroscopy and UV microfabrication; and silicon nanocrystal-based transistors (MOSFET) for non-volatile memories. These research activities were carried out in the laboratories of: Lyon Institute of Nanotechnology (INL - Ecole Centrale de Lyon), Interdisciplinary Research Institute of Grenoble (IRIG - CEA Grenoble) and the University of Tokyo in Japan (International Research Laboratory on MEMS and NEMS (Micro- and Nano-Electro-Mechanical Systems), LIMMS- IRL 2820, Hiramoto Laboratory). Within the Research Center on Hetero-Epitaxy & Applications (CRHEA), since 2004, he has been working on semiconductor materials with very large band gaps, in particular gallium and aluminum nitride alloys (AlGaN), for the production of optoelectronic components (light-emitting diodes (LEDs), lasers, optical waveguides, etc.). His work has led him to participate in numerous French National Research Agency (ANR) projects, as well as European projects. In particular, he has been coordinating ANR projects on white LEDs and UV LEDs, and within the Labex GaNEX, - national network on GaN-based materials -, on materials for UV emission. He is currently responsible for a project in partnership with the RIBER SA Company, a leader in the field of molecular beam epitaxy components. He is the author/co-author of over 140 publications and five patents.

He is responsible for the Advanced Photonics Group in CRHEA. He is also a member of the Environmental and Health Sciences (SENS) team, where he is developing the UV LED theme, and of the 2D+ team, where he is developing the van der Waals epitaxy growth of AlGaN materials on 2D materials (h-BN and graphene). He is a member of the Board of Directors since 2018 and of the Laboratory Council since 2016. He is involved in the Côte d'Azur University as a lecturer in electronics at the "Networks and Telecommunications" Institute of Technology, and as a member of the scientific council of "Complex Systems" Academy of Excellence. He is (has been) involved as a member of numerous program and expert committees in major international conferences on nitrides (ICNS, IWN, ISGN), ultra-wide bandgap materials (IWUMD) and semiconductor components and materials (SSDM - Japan). He is a visiting Professor at the Far Infra-Red (FIR) Center of the University of Fukui, Japan, since 2019.