

7th World Congress and Expo on **Green Energy**
&
3rd World Congress on **Wind & Renewable Energy**

June 24-25, 2019 Barcelona, Spain



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Status and prospects of adoption of WBG power devices-Swedish perspective

SiC Power Center was founded in 2012 by RISE Acreo, Swerea KIMAB and the Royal Institute of Technology (KTH) with financial support from Sweden's Innovation Agency (Vinnova) and Swedish Energy Agency. SiC Power Center is a platform for cooperation between industry, research institutes and academia within the whole value chain from material to systems. Leading industrial companies within automotive, energy systems and power electronics in Sweden and other research institutes have been members of the Center. The center has ambition; (a) to explore the potential of WBG electronics for future applications, increased competitiveness and sustainable development by joining resources, competences and knowledge, (b) to promote the introduction of WBG power electronics in products and applications where high energy efficiency, compactness and higher operation temperature provide significant system advantages and (c) to inspire and involve others. The main objectives are increased adoption of WBG devices in power electronic products and applications for energy savings, environmental gains and competitive advantages for Swedish industry. Since last year the name of the center is WBG Power Center and it has at present 16 companies and research groups as members. RISE Acreo is host of the center. RISE Acreo and WBG (SiC) Power Center organizes yearly conference (ISICPEAW, IWBGPEAW) with focus on power electronic applications of WBG devices. The conference has been organized since 2007 and this year changed name to SCAPE. Overview and highlights of the selected industrial and research projects financed by the Swedish Innovation Agency (Vinnova) and Swedish Energy Authority programs and by SiC Power Center will be presented. The selected examples demonstrate revolutionary gains in energy savings in WBG based power electronic energy conversion systems for a variety of applications. A summary of related projects in the areas of material, technology and device R&D in Sweden, will also be given.



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Biography

Mietek Bakowski is a Senior Expert and Manager of WBG Power Center at RISE Acreo. The main focus of his research, development work and teaching has been physics of operation, design, technology, reliability and applications of power semiconductor and MOS devices. He is author and co-author of over 130 publications and 25 US patents. Since 2012, he is a Co-Organizer of ECS Symp. GaN and SiC Power Technologies and was an Associate Editor of a Special Issue of IEEE Trans. Power Electronics and a Special Issue of IEEE Trans. Electron Devices on "Wide Bandgap Power Electronics" published in May 2014 and February 2015, respectively. He is a Member of International Advisory Committee to New National Program, Smart Power Semi-South Korea, 2017-2023, and a Co-Chair of SiC Materials and Devices group for International Technology Roadmap for Wide-bandgap Semiconductors (ITRW) initiated by IEEE Power Electronics Society (PELS) 2015. He is a Lead Organizer of the International Workshop on Applications of WBG Power Electronics, SCAPE.

Notes: