##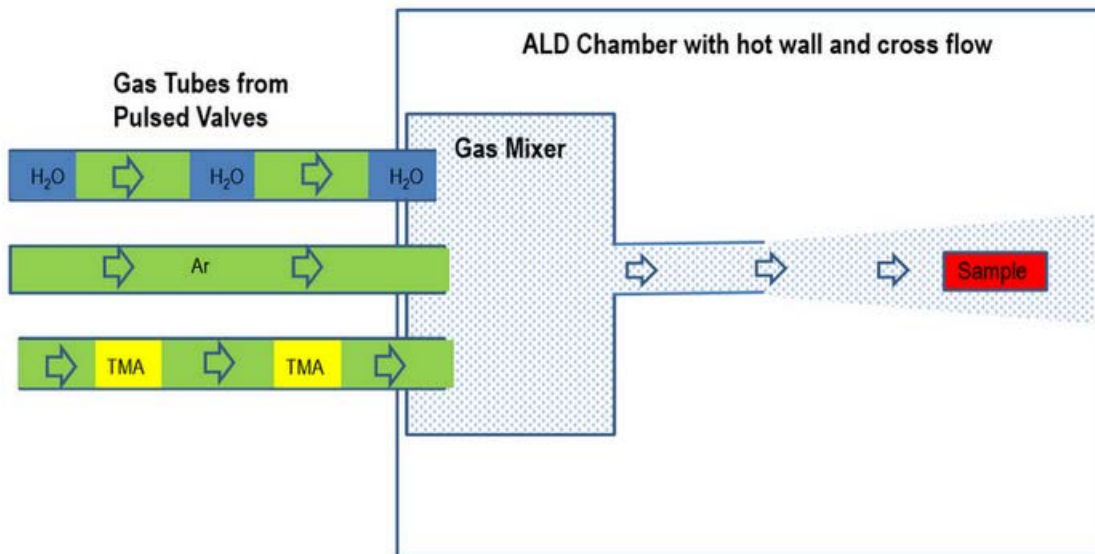 TSMC announces carbon nanotube (CNT) advances at IEDM 2020 that builds on SRC research out of Professor Kummel's group. Read more here and here »

Formation of Nano Nuclei (nano Fog) in Gas Phase in ALD Gas Mixer

Wally Rhines inducted into VLSI Semiconductor Industry Hall of Fame

Wally Rhines, an industry legend, and an SRC board member for almost 20 years, has been elected to VLSI's Semiconductor Industry Hall of Fame. Wally is currently serving as an executive committee member of the Decadal Plan, a 10-year SRC roadmap for semiconductor industry. Wally's contributions over the years have been indispensable to SRC and its members. Read more »

High-Five or Thumbs-Up? A New Device Detects which Hand Gesture You Want to Make

(Image courtesy of the Rabaey Lab)

UC/Berkeley researchers in the CONIX Center, led by CMU, have created a new device that combines wearable biosensors and artificial intelligence software to help recognize what hand gesture a person intends to make based on electrical signal patterns in the forearm. The work paves the way for better prosthetic control and seamless interaction with electronic devices. Dr. Ali Moin, the lead SRC student behind the multi-year SRC supported effort, recently started his career as an AI / ML researcher at Apple. Read more »

Two SRC Faculty Named as New Fellows to National Academy of Inventors

Two principal investigators out of JUMP's CRISP Center, Profs. Vijay Narayanan (Penn State) and Jason Cong (UCLA), have been selected to the 2020 Fellows class at the National Academy of Inventors. NAI Fellows demonstrate "a highly prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on the quality of life, economic development, and the welfare of society." Congratulations to Vijay and Jason on this wonderful recognition of your contributions!

NSF Backs Project to Create Next-Gen Wireless Devices
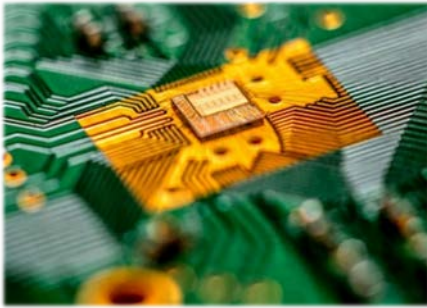
Credit: Jason Koski, Cornell

Cornell Prof. Alyosha Molnar has used ideas arising from JUMP's ComSenTer to win an NSF award of $880,000 to design a new class of radio devices capable of operating across a large portion of the growing wireless spectrum, while adaptively suppressing interferences. The award, which has Prof. Molnar collaborating with faculty at both Cornell and George Mason University, is part of NSF's Spectrum and Wireless Innovation enabled by Future Technologies (SWIFT) program Learn more about the NSF award here. Learn more about Prof. Molnar's active SRC research here. Read more »

Jisung Park Receives APL Materials Excellence in Research Award

ASCENT Postdoc, Dr. Jisung Park (working for Prof. Darrell Schlom at Cornell University) was awarded a 2nd place prize ($2,500 and waived charges on his next publication) for his paper, "Fully transparent field-effect transistor with high drain current and on-off ratio." Winning papers were selected by an external committee based on their scientific content. The award will be announced during the MRS Fall'21 meeting. Papers will also be highlighted on the APL Materials webpage and included in AIP Publishing email communications. Great job, Jisung! Learn more about Jisung here »
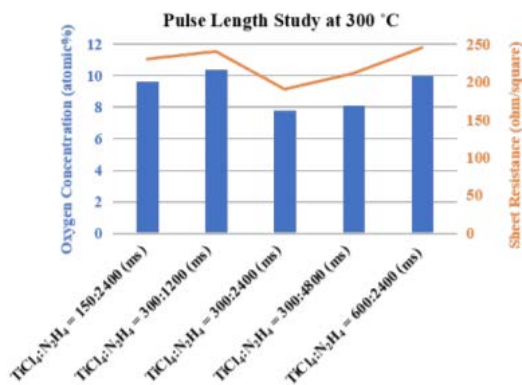
Low Resistivity TiN Thin Films Realized via Hydrazine Vaporization Technology

PhD candidate Cheng-Hsuan "Jimmy" Kuo and co-workers in the Kummel group at UC/San Diego have recently presented a study at IEEE SISC (December 16-18) on TiN ALD using the RASIRC Brute® Hydrazine (N_2H_4) vaporizer technology. Low resistivity TiN films (<200 µohm-cm at 350°C deposition) were synthesized without plasma treatment via ultra-clean ALD with extremely pure, anhydrous N_2H_4. Thermal ALD techniques like this are important for high aspect ratio features because they can provide high conformality. Learn more about Cheng-Hsuan's studies here. Read more »

TxACE Student Receives Best Paper Award at ASIANHOST 2020

Congratulations to Huifeng Zhu and Xuan (Silvia) Zhang at Washington University in St. Louis! Along with their collaborators, they won the Best Paper Award at the virtual ASIANHOST 2020 in December for "PowerScout: A Security-Oriented Power Delivery Network Modeling Framework for Cross-Domain Side-Channel Analysis." It presents a power delivery network (PDN) simulation framework that unifies the modeling of different PDN-based side-channel attacks and can perform fast nodal analysis of complex PDNs at the system level to quantitatively evaluate the severity of side-channel vulnerabilities. Read more »
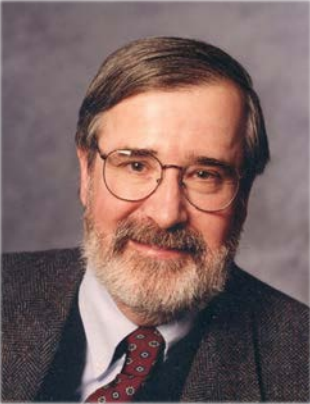
Edmund M. Clarke, University Professor Emeritus at CMU, and co-recipient of the 2007 ACM Turing Award Passes Away

SRC extends condolences to the family and friends of Prof. Clarke, recipient of many SRC contracts to pursue research in formal verification algorithms and techniques. Beginning in 1982 and continuing through 2014, Prof. Clarke was supported by SRC funding to investigate model checking techniques, which pushed the frontier of verifying correct computer design. Read more »

JUMP ASCENT PI receives Daniel C. Hughes, Jr. Memorial Award

Prof. Subramanian Iyer, UCLA, has received the International Microelectronics Assembly & Packaging Society's (IMAPS) Daniel C. Hughes, Jr. Memorial Award for his outstanding contributions in the field of microelectronics. This award is IMAPS highest and most prestigious technical honor and is awarded to individuals with the greatest combination of technical achievements related to microelectronics, and outstanding contributions supporting the microelectronics industry, academic achievement, or support and service to IMAPS. Read more »