



RESEARCH & DEVELOPMENT COUNCIL OF NEW JERSEY

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R&D Council Recognizes 2019 Edison Patent Award Winners and Special Individual Honorees

***Chairman's Award Goes to Governor Philip D. Murphy
Princeton University President Christopher L. Eisgruber is Educator of the Year
Nokia Bell Labs Nobel Laureate Arthur Ashkin gets Science & Technology Medal***

Chatham, NJ (October 21, 2019). The Research & Development Council today announced the 2019 Patent Award winners, along with the special individual honorees, who include: Governor Philip D. Murphy, Princeton University President Christopher L. Eisgruber and Nobel Laureate Dr. Arthur Ashkin. There are 15 patent award winners this year, covering a wide range of research, all of which will be highlighted at the annual Thomas Alva Edison Patent Awards Ceremony scheduled for November 14 at the Liberty Science Center in Jersey City.

The patents for this year's winners go to Avaya, BASF, Bristol-Myers Squibb, Celgene, Ethicon, ExxonMobil, Honeywell, Insmad, Merck, NJIT, Nokia Bell Labs, Rutgers, Siemens Corporate, Siemens Healthineers and SubCom. The patents range from major breakthroughs in pharmaceutical science, to creating digital twin organs of patients for diagnostic purposes, to establishing the algorithmic foundation for making the internet faster and more efficient. A complete list of winners, patent names, and numbers is listed below. Winners were selected from nominations that were reviewed by a team of R&D Council researchers who evaluated patents for significance of the problem, utility/socio-economic value, novelty and commercial impact.

"Every year, we watch the advances of the research coming from this state and we are overwhelmed by the quality and broad spectrum of work being done right here in New Jersey," said Larry O'Connell, chairman of the board of the R&D Council and IBM's vice president of Global Technical Leadership.

Governor Murphy's Innovation State theme, coupled with the creation of numerous supportive policies, has heightened the state's focus on research and development and innovation. "New Jersey has always been at the forefront of new research and innovation that has changed the world, dating back to Thomas Edison," stated Anthony Cicatiello, president of the R&D Council. "The Governor rightfully is focusing on our state's strengths and emphasizing the positive impact that we continue to have through New Jersey's innovation ecosystem."

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Princeton University has been one of New Jersey's most important research institutions since its founding in 1746. Today, the University stands as a global leader in research and teaching and, under President Eisgruber's leadership, has embraced innovation, connecting research to real-world problems and solutions and leading the way in the development of an innovation ecosystem in the heart of New Jersey. "President Eisgruber's tenure as Princeton president includes collaborations with innovation giants such as Microsoft, Google and New Jersey's own, Celgene. His administration also launched the Princeton Innovation Center Biolabs, a premier co-working space for science start-ups," stated Kim Case, R&D Council executive director. "Princeton's innovation impact is building exciting momentum, with the potential to benefit the economy, attract talent and continue New Jersey's legacy as a supportive environment in which to advance research and development."

New Jersey is recognized for its many Nobel Laureates. This year, the R&D Council will honor Bell Labs alum Dr. Arthur Ashkin, who received the 2018 Nobel Prize in Physics at age 96. Dr. Ashkin is considered the father of optical tweezers that grab particles, atoms, molecules, and living cells with laser beam fingers. The tweezers use laser light to push small particles towards the center of the beam and to hold them there. Through his research, Dr. Ashkin succeeded in capturing living bacteria without harming them and now optical tweezers are widely used to investigate biological systems.

The 40th Edison Patent Award Ceremony & Reception will take place on the evening of November 14, 2019, at the Liberty Science Center. Before 250 guests, Governor Murphy, President Eisgruber, Dr. Ashkin and our patent award winners will each be honored with a unique tribute film, followed by a celebratory dinner. Sponsorships, ads and tickets are still available. For more information call 973.274.8336 or email kcase@rdnj.org. This release can also be found online [here](#).

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As the Research & Development Council of New Jersey, we collaborate among industry, academia and government to grow and strengthen STEM in education, innovation and the economy. The R&D Council is a nonprofit 501(c)(3) organization whose membership includes representatives from academia, government and industry, including several Fortune 500 companies. More information can be found at the R&D Council's website: www.rdnj.org.

Growing STEM. Advancing Innovation. Impacting the World.

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2019 Edison Patent Award Winners

Organization	Category	Inventor Names	Patent Name and Number	Location
Avaya Inc.	Information Technology	George Erhart, David Skiba, Venkatesh Krishnaswamy, Ravi Sethi, Val Matula	Computer and Telephony Integration U.S. Patent 8,509,419	Morristown, NJ
BASF Corporation	Environmental	Alfonse Maglio, David Durocher	Method of Removing Strontium Cations from a Water Stream Using an Amorphous Titanium Silicate U.S. Patent 9,744,518	Iselin, NJ
Bristol-Myers Squibb	Enabling Technology	Ryan M. Moslin, David S. Weinstein, Stephen T. Wroblewski, John S. Tokarski, Shuqun Lin, Steven H. Spergel, Yanlei Zhang	Amide-Substituted Heterocyclic Compounds Useful as Modulators of IL-12, IL-23 and/or IFN α Responses U.S. Patent 9,505,748	Princeton, NJ
Celgene Corporation	Medical Technology	Peter Schafer, Raj Chopra, Antonio Lopez-Giroma, Laura Corral, Maria Yang, Pilgrim Jackson,	Methods for Determining Drug Efficacy using Cereblon-Associated Proteins U.S. Patent 9,857,359	Summit, NJ
Ethicon, Inc., a Johnson & Johnson Company	Medical Device	Duan Li Ou	Rapid Cure Silicone Lubricious Coatings U.S. Patent 9,434,857	Somerville, NJ



ExxonMobil Research & Engineering Company	Energy	Smruti A. Dance, Douglas E. Deckman, Kevin J. Kelly, Ahmed F. Abou El Enein, Benjamin D. Eirich	Lubricating Oil Compositions with Engine Wear Protection U.S. Patent 9,506,009	Annandale, NJ
Honeywell International	Industrial Process	Stephen Cottrell, Yuon Chiu, Haluk Kopkalli, Hsueh Sung Tung, Kevin Uhrich, Peter Scheidle	Methods of Making 2,3,3,3-Tetraflouro-2-Propene U.S. Patent 9,890,096	Morris Plains, NJ
Insmed Incorporated	Emerging Therapy	Gina Eagle, Renu Gupta	Methods for Treating Pulmonary Non-Tuberculous Mycobacterial Infections U.S. Patent 10,251,900	Bridgewater, NJ
Merck & Co., Inc.	Pharmaceutical	Timothy A. Blizzard, Helen Chen, Jeffrey D. Hermes, Jason E. Imbriglio, Seongkon Kim, Christopher J. Mortko	Beta-Lactamase Inhibitors U.S. Patent 8,487,093	Rahway, NJ
New Jersey Institute of Technology	Agriculture	Chrystoff Camacho	Systems and Methods for Aerial Seeding U.S. Patent 9,930,827	Newark, NJ
Nokia Bell Labs	Telecommunications	Hungkei Chow, Werner Coomans, Jochen Maes	Full-Duplex Communication Over a Shared Transmission Medium U.S. Patent 10,200,167	Murray Hill, NJ



Rutgers, The State University of New Jersey	Biotechnology	David Alland, Soumitesh Chakravorty	Detection of Drug Resistant <i>Mycobacterium Tuberculosis</i> U.S. Patent 9,708,671	Piscataway, NJ
Siemens Corporate Technology	Smart Grid	Sanjeev K, Srivastava, Sindhu Suresh, Paul J. Bruschi, Dong Wei, Parag Patre, Yaosue Xue	Flexible Control Architecture for Microgrid Resiliency U.S. Patent 10,116,164	Princeton, NJ
Siemens Healthineers	Medical Imaging	Tommaso Mansi, Tiziano Passerini, Ali Kamen, Bogdan Georgescu, Dorin Comaniciu	System and Method for Visualization of Cardiac Changes Under Various Pacing Conditions U.S. Patent 9,589,379	Princeton, NJ
SubCom	Telecommunication Systems	Yu Sun, Oleg Sinkin, Maxim Bolshtyansky, Alexei Pilipetskii, Dmitri Foursa	Spatial Division Multiplexed Optical Communication Systems and Amplifiers for the Same U.S. Patent 10,135,221	Eatontown, NJ