Дмитрий Александрович Усанов

(24 июля1943 г. – 5 июня 2019 г.)

5 июня 2019 года на 76 году скоропостижно скончался известный советский и российский ученый, заслуженный деятель науки Российской Федерации, заслуженный изобретатель Российской Федерации, доктор физико-математических наук, профессор, заведующий кафедрой физики твердого тела Саратовского национального исследовательского государственного университета имени Н.Г. Чернышевского Дмитрий Александрович Усанов.

Дмитрий Александрович родился 24 июля 1943 года в городе Менделеевске, республика Татарстан. В 1960 году, после окончания с серебряной медалью средней школы № 27 в Саратове, поступил на физический факультет Саратовского госуниверситета, который с отличием окончил в 1965 году.

Свою жизнь в науке Д.А. Усанов начал в аспирантуре под руководством доцента Л.И. Баранова и профессора З. И. Кирьяшкиной. В 1972 году защитил в СГУ диссертацию на соискание учёной степени кандидата физико-математических наук по специальности «Физика полупроводников и диэлектриков», а в 1989 – диссертацию на соискание ученой степени доктора физико-математических наук по специальности «Радиофизика, включая квантовую радиофизику». Работая в Саратовском государственном университете, прошел практически все ступеньки по служебной лестнице от старшего научного сотрудника до проректора по научно-исследовательской работе.

Д.А. Усанов являлся руководителем сформированной им научной школы. Под его руководством защищено 58 кандидатских и 8 докторских диссертаций. Он отмечен званиями «Почетный профессор СГУ», «Почетный доктор Башкирского государственного университета».

Д.А. Усанов сочетал научную деятельность с научно-организационной. Он был членом Президиума Международной академии наук высшей школы, академиком Российской академии естественных

наук, старшим членом Международного института электрорадиоинженеров (IEEE), членом национальной Гильдии экспертов в сфере профессионального образования, экспертом Минобрнауки РФ, экспертом Федерального государственного бюджетного научного учреждения Научно-исследовательский институт – Республиканский исследовательский научно-консультационный центр экспертизы (ФГБНУ НИИ РИНКЦЭ), экспертом РАН, членом Учебно-методического объединения Министерства науки и высшего образования РФ по направлению «Электроника и микроэлектроника», специальности «Микроэлектроника и полупроводниковые приборы», главным редактором журнала «Известия Саратовского университета. Новая серия. Серия: Физика», заместителем главного редактора журнала «Известия вузов. Прикладная нелинейная динамика», в организации издания которого ему принадлежит значительная заслуга, членом редколлегии журналов «Известия вузов. Электроника», «Физика волновых процессов и радиотехнические системы», «Прикаспийский журнал: управление и высокие технологии». В течение 30 лет он возглавлял в СГУ диссертационный совет по защите докторских и кандидатских диссертаций по специальностям «Радиофизика», «Физическая электроника», «Твердотельная электроника, радиоэлектронные компоненты, микро-инаноэлектроника, приборы на квантовых эффектах», «Физика полупроводников», «Оптика», членом совета по защите докторских и кандидатских диссертаций при СГУ по специальности «Биомеханика».

Под его руководством впервые в Саратовском государственном университете с 1998/1999 учебного года открыта подготовка бакалавров, а с 1999/2000 учебного года – подготовка магистров по направлению «Электроника и микроэлектроника». В 2000 году в СГУ в числе первых российских университетов, была открыта специальность «Медицинская физика».

Д.А. Усанов, работая более 20 лет (с 1989 по 2000 и с 2003 по 2013) в должности про ректора по научно-исследовательской работе, внес неоценимый вклад в получении Саратовским университетом статуса Национального исследовательского университета.

Среди научных достижений Д.А. Усанова – установление новых закономерностей взаимодействия электромагнитного излучения с полупроводниковыми элементами, в том числе обусловленных возбуждением высших типов колебаний и волн. Им обнаружено возникновение и исчезновение отрицательного сопротивления в полупроводниковых приборах, стимулированного электромагнитным излучением, эффекты невзаимности при одновременном воздействии на полупроводник электрического и магнитного полей, эффект автодинного детектирования в современных полупроводниковых приборах, эффекты возникновения в диодах Ганна стационарного многодоменного режима и формирования пространственно неоднородной структуры в полупроводниковых структурах с инжекцией неравновесных носителей заряда.

Оригинальные теоретические и экспериментальные исследования позволили предложить и создать новые типы устройств, выпущенные в виде серии. Среди наиболее известных – измеритель толщины покрытий типа СИТ-40, который был успешно применён для контроля теплозащитного покрытия на советском космическом корабле «Буран».

Д.А. Усанов и сотрудники его коллектива в 1982 году создали и запатентовали один из самых распространенных типов СВЧ-микроскопов – ближнеполевой СВЧ-микроскоп с коаксиальным зондом.

Значительное число научных трудов Д.А. Усанова относятся к исследованию свойств СВЧ- фотонных кристаллов и создании на их основе элементной базы радиоэлектроники и новых способов измерения параметров нанокомпозитов, микро- и наноструктур.

В последнее время Д. А. Усанов большое внимание уделял разработке и созданию новых методов диагностики медико-биологических систем. Под его руководством совместно с сотрудниками Московского НИИ глазных болезней имени Гельмгольца и Клиники глазных болезней Саратовского государственного медицинского университета разработан и внедрен в медицинскую практику

уникальный метод лечения тяжёлых зрительных нарушений у детей, разработан измеритель внутриглазного давления.

Д.А. Усанов – известный в стране и за рубежом изобретатель, автор более 200 изобретений, внедрённых в виде серий в промышленности и использующихся в медицинской практике. За разработку и внедрение новых типов приборов, созданных на основе своих изобретений, Д.А. Усанов награждался знаками «Ударник десятой пятилетки», «Отличник изобретательства и рационализации» (1983), «Лучший изобретатель Саратовской области» (1980, 1987), тридцатью пятью золотыми, серебряными и бронзовыми медалями на международных выставках изобретений и инноваций, медалями ВДНХ СССР и Всероссийского выставочного центра.

В 2008 году награждён золотыми медалями Международной федерации Ассоциаций изобретателей (InternationalFederationofInventors' Associations, IFIA) за победу в финале Кубка Европы (Нюрнберг, Германия) и финале Кубка мира (Сучжоу, КНР) Всемирного конкурса на лучшее изобретение в области компьютерных технологий. В 2009 году награждён Гран-при на 5-й Международной ярмарке изобретений SIIF-2009 (Сеул, Республика Корея). В 2011 году награждён Гран-при «AgroArca» на 4-й Международной ярмарке инноваций, экологической идеи и технологии в сельском хозяйстве и пищевой промышленности (Слатина, Хорватия).

За заслуги в научно-техническом творчестве он награжден бельгийскими орденами Офицера (2005) и Командора (2008), медалью Всероссийского выставочного центра «За успехи в научно-техническом творчестве» (2008), Почетным знаком «Во благо России» Федеральной службы по интеллектуальной собственности, патентам и товарным знакам (2009). В 2011 году Федерацией космонавтики России Д.А. Усанов был награжден медалью имени Первого космонавта Земли Юрия Алексеевича Гагарина.

За заслуги в развитии науки и высшего образования Дмитрий Александрович Усанов удостоен государственных наград РФ: в 1998 году присвоено звание «Заслуженный деятель науки РФ», в 2003 году награжден медалью ордена «За заслуги перед Отечеством» 2-й степени, в 2010 году – «Орденом Почета»; в 2018 году ему присвоено звание «Заслуженный изобретатель РФ».

Д.А. Усанов занимает достойное место среди ученых, посвятивших свою жизнь развитию полупроводниковой электроники, микро- и наноэлектроники, твердотельной СВЧ-электроники.

Светлая память о Дмитрии Александровиче навсегда сохранится в наших сердцах.

Коллеги

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