# Виталий Сергеевич Зуев

**(11 июля 1933 г. - 28 марта 2014 г.)**

28 марта 2014 г. на 81-м году жизни скоропостижно скончался главный научный сотрудник Физического института им. П.Н. Лебедева Виталий Сергеевич Зуев – доктор физико-математических наук, профессор, академик РАЕН, выдающийся ученый в области лазерной физики, автор многочисленных научных работ и двух монографий.
Виталий Сергеевич Зуев родился 11 июля 1933 г. В 1957 г. окончил радиофизический факультет Московского физико-технического института. Начиная с 1956 г., когда В.С. Зуев пришел в группу Н.Г. Басова, и до последнего дня жизни Виталий Сергеевич вел активную научную работу в Физическом институте им. П.Н. Лебедева. В 1964 г. он защитил кандидатскую диссертацию, а в 1970 г. – докторскую.

Деятельность В.С. Зуева была тесно связана с зарождением квантовой электроники – с созданием первых мазеров и лазеров, а также элементов лазерной техники, с разработкой лазеров с модулированной добротностью и их использованием в первых опытах по лазерному термоядерному синтезу, с созданием фотодиссоционных лазеров с накачкой излучением взрывной ударной волны и с развитием нелинейной оптики активных сред.
Им были созданы первый генератор на пучке молекул дейтерированного аммиака, первый отечественный лазер с модулированной добротностью, обнаружено «сверхсветовое» распространение импульса света в усиливающей среде. Он был одним из инициаторов разработки и создания мощных газовых лазеров с накачкой открытыми источниками оптического излучения – сильными ударными волнами, возбуждаемыми непосредственно в рабочей газовой среде взрывчатыми веществами и открытыми сильноточными электрическими разрядами. При его непосредственном участии в 1970 г. были созданы взрывные иодные фотодиссоционные лазеры с рекордной, не превзойденной до настоящего времени энергией импульса 106 Дж в одном пучке излучения. Эти лазеры

позволили в полномасштабных экспериментах детально изучить силовое воздействие высокоэнергетичного лазерного излучения на твердые мишени. Развитые В.С. Зуевым физические основы таких лазеров изложены в его докторской диссертации. В 1973 г. силами возглавляемого им коллектива был создан иодный фотодиссоционный лазер наносекундных импульсов с накачкой открытым сильноточным электрическим разрядом, который является прототипом наиболее мощного отечественного лазера «Искра-5», созданного во ВНИИЭФ в рамках программы по ЛТС. В последующие годы был разработан новый класс газовых лазеров с открытыми источниками оптической накачки, излучающих в спектральном диапазоне от ближнего ИК до ультрафиолета.

Большой вклад В.С.Зуев внес в развитие нелинейной оптики активных сред газовых лазеров. В частности, им и его сотрудниками в процессе фундаментальных исследований физических процессов в этих средах был обнаружен новый вид вынужденного рассеяния света, названного авторами энтальпийным, при котором раскачка парциальных колебаний среды обусловлена не энергией рассеиваемого света, как обычно, а энергией управляемых светом реакций. Результаты этих исследований дали возможность на много порядков повысить силу излучения высокоэнергетичных газовых лазеров, разработкой которых В.С. Зуев долгие годы занимался в рамках ряда крупных научно-исследовательских программ в тесном сотрудничестве с другими академическими и отраслевыми организациями.

Широкий научный кругозор и жажда научного поиска постоянно заставляли его искать новые области приложения своему таланту. Наряду с разработкой лазеров Виталий Сергеевич с присущей ему энергией занимался также спектроскопией фотоассоциации и исследованиями субволновой локализации объектов в сканирующей оптической и микро волновой микроскопии ближнего поля, а также поверхностных поляритонов и плазмонов.
В деятельности В.С.Зуева всегда большое место занимала воспитательная и научно-организационная работа. Он сформировал работоспособный творческий коллектив – сектор Фотохимических процессов, преобразованный затем в лабораторию, был членом Научного совета АН СССР по проблеме «Когерентная и нелинейная оптика», председателем Совета молодых ученых ФИАН, председателем ГЭКа на физфаке МГУ. Являясь руководителем научной школы, он много сил отдавал подготовке новых высококвалифицированных научных кадров, заражая своих учеников беззаветной преданностью науке. Под его руководством было защищено более полутора десятков кандидатских диссертаций.

Неоценима роль В.С. Зуева в создании, становлении и развитии журнала «Квантовая электроника». В течение 15 лет – «золотых лет квантовой электроники» – он был заместителем главного редактора журнала, и еще столько же, вплоть до конца века, членом его редколлегии.

Работы В.С. Зуева внесли весомый вклад в развитие квантовой электроники. Его научная и организационная деятельность отмечена орденом «Знак почета», Государственной премией СССР, премией имени Л.И.Мандельштама.

И в научной, и в повседневной жизни Виталий Сергеевич был исключительно порядочным и честным человеком, надежным другом, готовым в любую минуту прийти на помощь.

Его уход – невосполнимая потеря для его друзей и коллег.

*О.Н.Крохин, Л.Д.Михеев, О.Н.Носач, Е.П.Орлов, А.С.Семенов*

*О. Н. Крохин, Л. Д. Михеев, О. Ю. Носач, Е. П. Орлов, А. С. Семенов, Квантовая электроника, 2014, том 44, номер 4, 392*

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