

Foreword

Anniversary of Professor Sorin Dan ANGHEL

Professor Sorin Dan ANGHEL was born in 1951, Sighisoara, Romania, and graduated Babes-Bolyai University Cluj-Napoca in 1975. After graduating Faculty of Physics, he was assigned by the Ministry of Education to work as a physicist in industry at Geologic and Geophysics Prospections for Hydrocarbons Enterprise, Bucharest (1975-1979). Between 1979-1987 continued to work as a physicist at Heavy Machinery Factory, Cluj-Napoca. Since 1984 to 1991 he held activities at Research Institute for Analytical Instrumentation (ICIA) Cluj-Napoca, as Senior Research Scientist III in Laboratory for Gas Discharges and Atomic Spectroscopy. Prof. S.D. Anghel earned in 1991 his PhD in Physics.

Since 1991 worked at Babeş-Bolyai University, Faculty of Physics as teaching assistant professor (1991-1999), associate professor (1999-2003) and professor (2003-present), respectively.

Professor Sorin Dan ANGHEL presented courses, lectures and laboratory for disciplines: Electronics, Instrumentation and sensors and Plasma Physics.

Understanding the importance of modern directions in science and technologies, he introduced new information from the field of applied physics, in sensors and electronic courses. The courses are very clearly presented and at high scientific level. The teaching activities performed by Sorin Dan ANGHEL are much appreciated by the students.

At doctoral school presented lectures on “Nanostructures and polymeric systems”, and in the position of PhD coordinator he supervised doctoral theses.

The scientific research activity of Sorin Dan ANGHEL is directed over plasma study, particularly over the radiofrequency(RF) plasmas generated at atmospheric pressure in argon, helium, air etc.

The main directions of research are:

- a) The building of devices for generating of Inductively Coupled Plasma (ICP) - 27.12 MHz, 1-3 kW, Capacitively Coupled Plasma (CCP) - 10 MHz, 0.5-80 W, Dielectric Barrier Discharge (DBD) - 20 kHz-2 MHz, 1-20 W and Plasma in/on Liquids - 10 MHz, 16 W, respectively;

- b) Fundamental studies over the generated plasmas: plasma parameters, electrical modelling, studies based on Fourier analysis of the influence of the plasma on the waveform of generated oscillations by the RF oscillator;
- c) Applications of generated plasmas at : spectral sources for analysis of liquid samples, spectral sources for direct analysis of conductive and nonconductive solid samples, treatment of microorganisms by non-thermal capacitively coupled plasma, nanoparticle synthesis, dyes degradation and plasma activated water.

The scientific results of Prof. Sorin Dan ANGHEL were published in 60 papers in ISI quoted journals (*J. Phys. D: Appl. Phys.*, *Plasma Sci. Technol.*, *IEEE Transactions on Plasma Science*, *J. Nanopart. Res.*, *J. Electrostat.*, *Spectrochim. Acta Part B*, *Nucl. Instr. and Methods in Phys. Research Sect. B*, *Plasma Sourc. Sci. and Technol.*, *Meas. Sci. Technol.*, *J. Anal. At. Spectrom.*, *Mikrochimica Acta*, *Analytical Letters*, *Talanta*, *Roum. Journ. Phys.*, etc.). He has Hirsch indices $H=10$ (Scopus 2017).

His theoretical and experimental researches as well as his pedagogic experience were fructified into a series of 10 books, frequently used by the students in area of their courses. These are remarkable for their accuracy and clarity as well as scientific level the monographies: "Plasma physics and applications", "Fundamentals of analogic and digital electronics" (Cluj, Romania, University Press 2001 and 2007), and Thermally Non-aggressive Atmospheric Pressure Plasma (LAP LAMBERT Academic Publishing, Saarbrucken 2013).

Professor Sorin Dan ANGHEL is member of Romanian and international scientific societies as: Romanian Physical Society, European Physical Society, Balkan Physical Society.

He has held several management positions: Dean of the Faculty of Physics, Cluj-Napoca, Head of the Plasma Physics Laboratory, Senat member of "Babes-Bolyai" University, Member of Faculty of Physics Council.

Professor Sorin Dan ANGHEL has extensive experience in the management of national / international scientific projects, gaining many scientific contracts and grants.

Professor Sorin Dan ANGHEL was member of the Editorial Board of Journal *Studia UBB Physica*, and reader to a series of international scientific journals. He was invited to sustain plenary presentations at many national and international meetings and conferences.

Today, at sixty-five years old, Prof. Sorin Dan ANGHEL continue his scientific activity work with doctoral students.

Happy birthday and all the best!

Prof.dr. Aurel Pop

Dean-Faculty of Physics