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Yu. N. Tszyan (Chiang) graduated from Department of Radiophysics of Kharkov Politechnical Institute in 1960. Since that time he devoted himself to scientific activities in the Laboratory of Kinetic Properties of Conducting Systems in ILTPE. In sequence, he held the positions of Leading Engineer (1960-1970), Junior Researcher (1970-1973), Senior Researcher (1973-1986), and Leading Researcher (1985-till now). From 1988 to 1993 he pluralizes as a Professor of the H.S. Skovoroda Kharkiv National Pedagogical University. The total length of scientific work is 58 years.

In 1970 Yu. N. Chiang maintained a Candidate Thesis entitled "Influence of Temperature and Magnetic Field on Conductivity of Aluminum Single Crystals". In 1984 the Degree of Doctor of Physics and Mathematics with Thesis "Influence of Electron–Phonon Interaction on Conduction–Electron Transport at Low Temperatures" was conferred on him. In 1992 he was given a rank of Professor.

He is a member of the Scientific Council on Problem "Electronic properties of conducting and superconducting systems".

Yu. N. Chiang is an author of more than 150 scientific works, among which 80 scientific articles and 2 inventions. The areas of Yu. N. Chiang's scientific interests are transport phenomena in solid state, non–linear features in normal–metal conductivity, common and high–temperature superconductivity, quantum–interference phenomena in NS–systems, strongly electron correlations, spin-dependent electronic conductivity. In particular, he studied kinetic phenomena in normal metals (conduction–electron scattering under size effect conditions, at high magnetic fields, deformation, varying impurity concentration, etc.), investigated transmitted phonon–drag effect in metal sandwiches, experimentally revealed negative differential conductivity in a normal metal, observed the Bernoulli effect in superconducting Indium, discovered non–linear resistance of NS boundary, studied thermoEMF, conductivity and magnetic susceptibility of HTSC, proposed a way to study the spin-hall effect by electrical methods.

The most important scientific works should include the following:

- 1. *Chiang Yu.N. (Tszyan).* Electronic transport in an NS system with a pure normal channel. Coherent and spin-dependent effects. Superconductivity Theory and Applications, InTechOpen book chapter, 2011
- 2. <u>Yu.N. Chiang, V.V. Eremenko, O.G. Shevchenko</u> / Electric Resistance of Thin Singlecrystal Aluminum Plates / Soviet Physics JETP 27, №5, 706-712 (1968)
- 3. <u>Yu.N. Chiang, V.V. Eremenko, O.G. Shevchenko</u> / Temperature dependence of the magnetic resistance of aluminum / Soviet Physics JETP 30, № 6, 1040-1047 (1970)
- Yu.N. Chiang, O.G. Shevchenko / Temperature and Weak Deformation Effect on the Longitudinal Resistance in Aluminium / Physica Status Solidi (b) 54, №1, K47-K50 (1972)

- Yu.N. Chiang, O.G. Shevchenko / Direct observation of phonon drag by electrons / Fizika Nizkikh Temperatur 6, №9, 1218-1221 (1980)
- 6. *Yu.N. Chiang, I.I. Logvinov* / Observation of a temperature-induced electric-field domain in a metallic sample / Fizika Nizkikh Temperatur 8, №7, 774-777 (1982)
- 7. <u>Yu.N. Chiang</u> / Superconducting conductivity modulator for wide helium-temperature range / Instruments and Experimental Techniques 28, №1-2, 224-226 (1985)
- Yu.N. Chiang, O.G. Shevchenko / The Bernoulli effect in superconducting indium / Sov. J. Low Temp. Phys. 12, №8, 462-464 (1986)
- Yu.N. Tszyan, O.G. Shevchenko, I. Volynskii / Low-Temperature Thermoelectric Power of the Indium--Cadmium System in the Vicinity of an Electronic Topological Transition Near a Point T of the Brillouin Zone / Soviet Physics-Solid State 31, №4, 645-648 (1989)
- 10. <u>Yu.N. Chiang, O.G. Shevchenko</u> / Non-linear self-oscillations in normalsuperconducting contacts / Journal of Physics: Condensed Matter 4, №1, 189 (1992)
- 11. <u>Yu.N. Chiang, O.G. Shevchenko / Direct measurements of the Bernoulli effect in</u> superconductors / Low Temperature Physics 22, 513-515 (1996)
- 12. *Yu.N. Chiang, O.G. Shevchenko* / Contribution of Andreev reflection to the increase in the resistance of the normal metal in a bimetallic *N-S* structure / Journal of Experimental and Theoretical Physics 86, №3, 582-585 (1998)
- 13. *Yu.N. Chiang, O.G. Shevchenko* / Conductivity of normal metal with phase-coherent excitations in the presence of NS boundary / Low Temperature Physics 25, №5, 314-326 (1999)
- 14. *Yu.N. Chiang, O.G. Shevchenko* / Mesoscopic quantum oscillations of the resistance in the intermediate state of type-I superconductors / Low Temperature Physics 27, №12, 1000-1009 (2001)
- 15. <u>Yu.N. Chiang, O.G. Shevchenko</u> / Observation of subgap resistive oscillations in doubly connected SNS systems with the suppressed proximity effect / JETP Letters 76, №11, 670-674 (2002)
- 16. <u>Yu.N. Chiang, O.G. Shevchenko, R.N. Kolenov</u> / Manifestation of coherent and spindependent effects in the conductance of ferromagnets adjoining a superconductor / Low <u>Temperature Physics 33, №4, 314-320 (2007)</u>
- 17. <u>Yu.N. Chiang, M.O. Dzyuba, V.F. Khirnyĭ, O.G. Shevchenko, A.A. Kozlovskiĭ / Electric</u> properties of erbium cobaltites / Low Temperature Physics 35, №11, 876-882 (2009)
- 18. <u>Yu.N. Chiang, M.O. Dzyuba, O.G. Shevchenko, V.F. Khirnyi</u> / Low-temperature resistance minimum in granular hole-doped cobaltites / Low Temperature Physics 38, <u>№1, 59-63 (2012)</u>
- 19. <u>M.O. Dzyuba, Yu.N. Chiang, D.A. Chareev, A.N. Vasiliev</u> / Spin-dependent conductivity of iron-based superconductors in a magnetic field / Physica B: Condensed Matter 464, 68-73 (2015)
- 20. <u>Yu.N. Chiang, M.O. Dzyuba</u> / Highly-sensitive analog magnetometer based on a nullpicovoltmeter / Instruments and Experimental Techniques 59, №4, 565-568 (2016)
- 21. <u>Yu.N. Chiang, M.O. Dzyuba / Intrinsic spin-Hall effect in aluminum / EPL (Europhysics</u> Letters) 120 (1), 17001 (2017)
- 22. <u>Yu.N. Chiang, M.O. Dzyuba / Non-equilibrium Spin-Hall effect in irregularly shaped</u> aluminum and tungsten samples / Physica B: Condensed Matter 558, 44-48 (2019)