

Curriculum Vitae
Moo-Hyun Cho

Professor, Department of Physics, POSTECH
San 31 Hyoja-Dong, Pohang, S. Korea 790-784
Tel: +82-54-279-2075,
M.P: +82-10-3811-2075
Fax: +82-54-279-3099,
e-mail: mhcho@postech.ac.kr



Birth Date: October 1, 1954
Nationality: Republic of Korea
Passport number: M78811827
Home Address: Kyosoo Apt. 7-1703, Jigok-Ro 155, Pohang 37673, S. Korea

■ **Education:**

- Ph.D. (Oct. 1988): Nuclear Eng. & Eng. Physics Dept, Univ. of Wisconsin-Madison, U.S.A. (Ph.D. Dissertation, "Temporal Evolution of Langmuir Sheaths"(Advisor; Professor Noah Hershkowitz)
- MS (Feb. 1979): Nuclear Engineering, Graduate School, Seoul National University, Seoul, Korea
- BS (Feb. 1977): Nuclear Engineering, Seoul National University, Seoul, Korea

■ **Experiences & Achievements:**

- | | |
|-----------------------|--|
| Sep. 2015 - present | Exec. Vice President & Provost , POSTECH
(http://www.postech.ac.kr/eng) |
| Sep. 2011 - Aug. 2015 | Director of PAL (Pohang Accelerator Lab), POSTECH
(http://pal.postech.ac.kr/r/paleng/) |
| Jan. 2011 - present | Adjunct professor of the Division of Advanced Nuclear Engineering |
| Aug. 2010 – Aug. 2012 | Member of Science Advisory Committee, National Fusion Research Institute, S. Korea (https://www.nfri.re.kr/eng/index) |
| Jan. 2010 - Aug. 2011 | Dean of Research Affair, POSTECH, Pohang, S. Korea |
| May 2010 - May 2012 | Member of S&T Policy Advisory Committee of MEST, S. Korea (Space & Big-Science Fields) |
| May 2010 - May 2012 | Member of Working Committee for National Thermonuclear Fusion Research, S. Korea |
| Feb. 2008 - Dec. 2009 | Division Director of Nuclear Fusion Program, National Research Foundation (2 yr. full-time appointment) |
| July 2009 - Jun. 2011 | Member of advisory group of KRCF (Korea Research Council of Fundamental Sci. & Tech. especially for the National Plasma Fusion and plasma technology R&D) |
| Jan. 2009 - Dec. 2010 | Vice president of the Korean Physical Society (KPS) |
| Apr. 2007 - Apr. 2010 | Member of ITER TAG (Technical Advisory Group) |
| Dec. 1995 - Aug. 2007 | <i>KSTAR Project</i> ; construction of the Superconducting Coil Power Supply |

System and the Microwave Heating & Current Drive Systems

- Jan. 2005 - Dec. 2006 Chief Editor of “Physics & High Technology” published monthly by KPS (Korean Physics Society), S. Korea
- Jun. 2002 - May. 2004 Chairman of Division of Plasma Physics, KPS, S. Korea
- Mar. 2000 - Feb. 2001 APS (RF Group) Visiting Scientist, Argonne National Lab, U.S.A.
- Mar. 1997 - Apr. 2003 *Environmental Projects*; Special pulsed plasma system development (Technology successfully transferred to POSCOict)
- Sept. 1989 - Sept. 1998 *Pohang Light Source (PLS) Project, 2-GeV e-Linac construction.* (Contributed to build the high power pulse modulator systems for the 80-MW class klystrons)
- Jan. 1997 - present Adjunct professor at the School of Environmental Sci. & Eng., POSTECH
- Mar. 2002 - present Tenured professor, Physics Department, POSTECH
- Sept. 1993 - Mar. 2002 Associate Professor, Physics Department, POSTECH
- Aug. 1989 - Sept. 1993 Assistant Professor, Physics Department, POSTECH
- Oct. 1988 - Aug. 1989 Post Doc., Univ. of Wisconsin-Madison, U.S.A.
- Jan. 1983 - Oct. 1988 Research Assistant, Univ. of Wisconsin-Madison, U.S.A.; worked on experimental study of the dynamic plasma sheath phenomena
- Jun. 1979 - Jun. 1982: Full time Physics Instructor at the 3rd Military Academy, S. Korea

■ Fields of Research Interest:

Experimental study of plasma physics and plasma processing technology
Industrial applications of plasma & accelerator technologies for environmental engineering
Big science project planning and management

■ Professional Society:

Korean Physical Society (Fellowship member)
Korean Nuclear Society (Lifetime membership)
Korea Accelerator & Plasma Research Association (Member of board of directors)
American Physical Society (Division of Plasma Physics)
IEEE (Plasma Science)

■ Award & Citation:

- Minister of Education, Science and Technology citation for the work achievement during the KSTAR construction project (Sep. 9, 2009)
- Korea Presidential citation for the work achievement during the PLS construction (Dec. 4, 1994)
- Citation of Pohang City Mayor for the community service for public science education (Jun. 1, 2005)
- Group Bronze Award for the Nationwide competition of Voluntary Service for the Popularization of Science (participated with “Fun Physics Mobile Laboratory” for students in remote countryside) organized by Joong-Ang Daily Newspaper (Dec. 2006)

■ Graduate Students Thesis Guide since 1989:

22 Ph.D. and 24 Master degree students, and currently guiding 5 students. (As of July 2017).

■ Journal publications and conference participations:

- Professor Moohyun Cho authored over 150 reviewed journal publications for the work he carried out with graduate students and researchers. He also participated numerous international conferences and expert workshops related with particle accelerators and plasma fusion research.
- Below is the selected partial list of scientific journal publications
 1. “*Precision Control of the Electron Longitudinal Bunch Shape Using an **Emittance-Exchange Beam Line***,” G. Ha, M. H. Cho, and W. Namkung, J. G. Power, D. S. Doran, E. E. Wisniewski, M. Conde, W. Gai, W. Liu, C. Whiteford, Q. Gao, K.-J. Kim, A. Zholents, and Y.-E Sun, C. Jing, P. Piot, Phys Rev Lett 118, 104801 (2017 March)
 2. “*Measurement of **isomeric yield ratios** for the $^{110}\text{Pd}(\gamma, n)^{109\text{m.g}}\text{Pd}$ reaction*,” Nguyen Thi Hien, Guinyun Kim, Kwangsoo Kim, Muhammad Nadeem, Md. Shakilur Rahman, Nguyen Van Do, Pham Duc Khue, Kim Tien Thanh, Sung-Gyun Shin, Moo-Hyun Cho, J Radioanal Nucl Chem (2017) 311:p1559–1564
 3. “***Sheath expansion of two-dimensional grid electrodes subjected to short pulses of negative high-voltage***,” Changho Yi, Huijea Lee, Byungjae Park, Won Namkung, and Moohyun Cho, Plasma Source Sci. Tech 24 (2015) 0150032 (6pp)
 4. “*Commissioning of the **PLS-II***,” S. Shin S. Kwon, D-T. Kim, S.H. Nam, M. Cho et. al, JINST (J. INSTRUMENTATION) 8, P01019 (2013) (12pp)
 5. “*An overview of **KSTAR results***,” Jong-Gu Kwak, Y.K. Oh, H.L. Yang, M. Kwon, G.S. Lee, J.G. Bak, E.N. Bang, M.H. Cho, et. al. and the **KSTAR Team**, Nucl. Fusion 53 (2013) 104005 (15pp)
 6. “*Test result of 5 GHz, **500kW CW prototype klystron** for KSTAR LHCD system*,” H. Do, S. Park, J.H. Jeong, Y.S. Bae, H.L. Yang, L. Delpech, R. Magne, G.T. Hoang, H. Park, M.H. Cho, W. Namkung, Fusion Engineering and Design 86 (2011) 992–995
 7. “*Hydrogen recovery from **the thermal plasma gasification** of solid waste*,” Youngchul Byun, Moohyun Cho, Jae Woo Chung, Won Namkung, Hyeon Don Lee, Sung Duk Jang, Young-Suk Kim, Jin-Ho Lee, Carg-Ro Lee, Soon-Mo Hwang, J. Hazardous Materials, V.190(1-3), pp317-323 (June 2011) /ISSN 0304-3894
 8. “*Development status of **KSTAR 5GHz LHCD** system*,” S. Park, H. Do, J.H. Jeong, W. Namkung, M.H. Cho, H. Park, Y.S. Bae, H.L. Yang, R. Ellis, J.R. Wilson, J. Hosea, Fusion Engineering and Design 85 (2010) 197–204
 9. “***Nuclear Data Production Facility Based on the Electron Linac***,” G. N. Kim, R. Machrafi, H. Ahmed, D. Son, V. Skoy, Y. S. Lee, M. H. Cho, H. S. Kang, I. S. Ko, W. Namkung, J. Korean Phys. Soc., 43, 479 (2003)
 10. “*Study of the effects of ECH power and pulse length on **preionization** in the KSTAR Tokamak*,” Y. S. Bae, W. Namkung, M. H. Cho, A. C. England, IEEE Trans. Plasma Sci., PS-31, 745-751 (2003)
 11. “***Particle and Power Balances of Hot-Filament Discharge Plasmas in a Multi-dipole Devices***,” M.H. Cho, N. Hershkowitz, and T. Intrator, J. Appl. Phys. Vol.67(7), 3254 (1990)
 12. “*Temporal Evolution of **Collisionless Sheaths***,” M.H. Cho, N. Hershkowitz, and T. Intrator, J. Vacuum Sci. Technol. Vol.A6, 2978 (1988).
 13. “*Experimental Observation of Slow Ion Acoustic Double Layers*,” C. Chan, M.H. Cho, N. Hershkowitz, and T. Intrator, Phys. Rev. Lett. 57(24), 3050-3053 (1986).
 14. “*Laboratory Evidence of Ion Acoustic Type **Double Layer***,” C. Chan, M.H. Cho, N. Hershkowitz, and T. Intrator, Phys. Rev. Lett., 52(20), 1782 (1984).



Prepared by Moohyun Cho on July 14, 2017