

Group II : Science, Technology and Biological Effects of Tritium

II. 1	Cooperative works on fundamental studies on tritium technology and biological effects of tritium	133
II. 2	Fundamental studies on tritium technology--Breeding, recovery, and recycling	135
II. 3	Tritium release from neutron-irradiated intermetallic lithium-aluminum	137
II. 4	Tritium-release behavior from irradiated lithium compounds	139
II. 5	Tritium permeation through amorphous metal Pd ₈₀ Si ₂₀ alloys	141
II. 6	Recovery and utilization of tritium gas	143
II. 7	Enrichment of tritium in water by Al-alloys	145
II. 8	Isotope fractionations by high-performance liquid chromatography ..	147
II. 9	Laser isotope separation of deuterium and tritium	149
II.10	Separation and concentration of tritium by the palladium alloy membrane	151
II.11	Equilibrium characteristics on cryo-sorption of H ₂ , D ₂ and He on molecular sieve zeolites	153
II.12	Development of tritium gas handling faculty	155
II.13	Development of tritium concentration data acquisition system for liquid scintillation counter	157
II.14	Detection of tritium by bremsstrahlung and fluorescent X-ray counting	159
II.15	Hydrogen isotope effects at desorption of water from desiccants ...	161
II.16	Monitoring system for fusion reactor and tritium plant	163
II.17	Chemical interaction of tritium with wall substances in helium	165
II.18	Compilation and formulation of standard data of thermodynamic and transport properties of tritium oxide (T ₂ O)	167
II.19	Fundamental studies on tritium technology--Safety handling, permeation control, and	169
II.20	Behaviors of hydrogen & it's isotopes (D, T) in metals containing imperfections	171
II.21	Distribution of tritium in SUS 316 stainless steel	173
II.22	Storage of hydrogen into plasma-deposited silicon: New tritium sealing possibility	175
II.23	Safety confinement of tritium	177
II.24	Estimation on leakage of tritium gas--From high-pressure experiments on H ₂ , D ₂ and He gases	179

II.25	Hydrogen behavior in metals under radiation field and metal corrosion by lithium	181
II.26	Tritium permeation under thermal gradient through Nb first wall ...	183
II.27	Tritium adsorption of reactor materials damaged by heavy-ion irradiation	185
II.28	Permeation, diffusion, and solution of hydrogen isotopes in/through organic materials	187
II.29	Basic study on diffusion and permeation of tritium in the solid phase	189
II.30	Water vapor permeation through rubbers	191
II.31	Development of rubber materials having the excellent barrier property of tritium gas	193
II.32	Safety aspects of tritium waste	195
II.33	Adsorption and desorption of tritium on secondary electron multipliers	197
II.34	Application of channel electron multiplier to tritium containing system	199
II.35	Development of DT fuel fill system for laser fusion target	201
II.36	Studies of biological effects of tritium	203
II.37	Cooperative study on biological effects of tritium beta-rays with respect to man	205
II.38	The system of the treatment of tritiated water in biological experiments	207
II.39	Cytogenotoxicity of tritium: Sister chromatid exchanges induced by tritiated water in mice	209
II.40	Genetic effects of tritium	211
II.41	Microdosimetry of ³ H beta rays--Analysis of survival curves of bacteria in tritiated water	213
II.42	Calculation of cellular microscopic dose distribution from the tritium β-ray	215
II.43	Effects of tritium on the cells and their constituents	217
II.44	Effects of tritium on DNA: Adenine radiolysis	219
II.45	Tritium distribution in environmental ecosystems in the vicinity of certain nuclear facilities	221
II.46	Effects of low-dose irradiation from tritium labelled uridine on the induction of somatic mutations in tradescantia	223
II.47	Somatic effects of tritium	225
II.48	Effects of HTO on yeast cells	227

II.49	Effects of tritiated water on several model biological systems	229
II.50	Effects of tritiated water on survival and mutagenesis cells, and on muse sperm	231
II.51	Development of the monitoring system for human exposure to tritium: Chromosomal aberrations in human G ₀ lymphocytes exposed to HTO	233
II.52	The effect of tritium water on hematopoietic tissue--Preliminary experiments	235
II.53	Hematopoietic disorders by tritium compounds in men	237
II.54	Behavior of environmental tritium	239
II.55	Tritium behavior in food chain	241
II.56	Incorporation of tritium to the food chain	243
II.57	Incorporation of the environmental tritium into the biological compounds	245
II.58	Uptake of tritium into sperms of mice injected with tritium- labelled substances	247