

2	Facts of the Cold Fusion Phenomenon	21
2.1	How the experiments are conducted?	23
2.1.1	Condition 1. Making collision number of hydrogen isotopes maximum	23
2.1.2	Condition 2. Adsorption of collided molecules, atoms and ions on the surface	24
2.1.3	Condition 3. Absorption of adsorbed molecules, atoms and ions into solid	24
2.2	How and where the CFP occurs?	25
2.2.1	The CFP in transition-metal hydrides and deuterides	26
2.2.2	The CFP in other solids	31
2.3	Number of reactions N_x producing an observable x	31

2.4	Outline of TNCF model and neutron drop model—Basis of data analysis	33
2.4.1	TNCF model	34
2.4.2	Neutron drop model	35
2.5	Nuclear transmutation (NT)	35
2.5.1	Nuclear transmutation by decay (NT_D)	38
2.5.2	Nuclear transmutation by absorption (NT_A)	40
2.5.3	Nuclear transmutation by fission (NT_F)	41
2.5.4	Nuclear transmutation by transformation (NT_T)	44
2.5.5	Isotopic ratio of generated nuclides by NT's	46
2.6	Tritium T (or Triton ${}^3_1\text{H} = t$)	46
2.7	Neutron n	48
2.8	Helium-3 ${}^3\text{He}$ and Helium-4 ${}^4\text{He}$	49
2.9	Excess heat Q	51
2.9.1	Excess heat in general	51
2.9.2	Extensive measurement of excess heat by McKubre et al.	52
2.10	Absence of gamma ray	53
2.11	The stability effect in nuclear transmutation	54
2.12	The inverse power law for occurrence of events in the CFP	55
2.13	After effect and aging effect	57
2.13.1	After effect	57
2.13.2	Aging effect	57
2.14	The qualitative reproducibility	58
2.15	Summary of experimental results of the CFP	58
2.15.1	Summary of experimental results	59
2.15.2	Tables of analyzed data sets given in the previous book	60