Supplementary Texts and References

**= On Reserve at UM Engineering Library

**J. R. Roth**
*Industrial Plasma Engineering, Vol 1 & 2*
Practical view of low temperature plasma physics from an engineering perspective.

*A. Fridman and L. A. Kennedy*  
*Plasma Physics and Engineering*
Comprehensive text on low temperature plasmas

*A. Fridman*  
*Plasma Chemistry*
Physics of low temperature plasmas and application to gas phase and surface chemistry.

*C. K. Birdsall and A. B. Langdon*  
*Plasma Physics via Computer Simulation*
Introductory text on the use of Particle-in-Cell simulations for modeling plasmas.

*M. Mitchner*  
*Partially Ionized Gases*
 Mostly for fully ionized plasmas but good treatment of sheaths, continuity equations, and electron-ion collisions.

*G. Bekefi*  
*Principles of Laser Plasmas*
Specialty items such as recombination, discharge stability and vibrational excitation.

*L. M. Biberman, et al.*  
*Kinetics of Nonequilibrium Low-Temperature Plasmas*
Good general reference but difficult to read. (Russian Translation)

*S. C. Brown*  
*Basic Data of Plasma Physics*
Classic text for most topics.

*B. Chapman*  
*Glow Discharge Processes*
Good “gut level” monograph. Good source for RF discharges.

*F. F. Chen*  
*Introduction to Plasma Physics*
Fully ionized plasmas with good treatment of Debye lengths, and magnetic field effects.

*B. Cherrington*  
*Gaseous Electronics and Gas Lasers*
Good basic introduction.
J. Cobine  
**Gaseous Conductors**  
Extremely empirical treatment of topics but good presentation.  
(You can learn something from this book on the first reading.)

L. Huxley  
**Diffusion and Drift of Electrons in Gases**  
Advanced monograph on Boltzmann Equation and Transport Coefficients.

U. Kortshagen  
**Electron Kinetics and Applications of Glow Discharges**  
Proceedings of NATO Workshop. Very good overview articles

L. Loeb  
**Basic Processes of Gaseous Electronics**  
Classic and comprehensive text.

D. Manos and D. Flamm  
**Plasma Etching: An Introduction**  
Compilation on methods in plasma processing.

T. Mark  
**Electron Impact Ionization**  
Thorough treatment of electron impact collisions producing ionization.

E. McDaniel  
**Ion Molecule Reactions**  
Advanced monograph on reactions between ions and neutral atoms/molecules. Good tables of reaction rate coefficients.

L. C. Pitchford, et al.  
**Swarm Studies and Inelastic Electron-Molecule Collisions**  
Compilation of papers on fundamental studies in nonequilibrium electron transport and obtaining cross sections from swarm data.

Y. Razier  
**Gas Discharge Physics**  
If you are going to buy a second text, get this one. It has all the material that’s important, but is difficult to read.

Y. Razier  
**Radio Frequency Capacitive Discharges**  
Exhaustive treatment of this important discharge device for plasma etching.

S. Rossnagel  
**Handbook of Plasma Processing Technology**  
Compilation of papers on basics of plasma etching and deposition.

B. M. Smirnov  
**Physics of Ionized Gases**  
Good general reference but difficult to read.  
(Russian Translation)
A. von Engel  
**Ionized Gases**  
Collection of lectures given at Oxford.  
Considered a classic for introduction to field.

A. von Engel  
**Electric Plasmas; Their Nature and Uses**  
Simplified view of gas discharges but good introduction.

J. Waymouth  
**Electric Discharge Lamps**  
Defining text for fluorescent lamp physics.