

## Curriculum Vita

MEL I. MENDELSON, Ph.D.

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### Summary

Over twenty-five years experience in failure analysis of ceramics, glass, composites, metals, polymers and construction materials. Broad background in correlating failure with design, materials, manufacturing and microstructure.

### Education and Training

Training: Professional Courses, Workshops and Conferences, 1973 - Present.  
Ph.D., Materials Science & Engineering - Northwestern University, 1973.  
M.S., Materials Science & Engineering - Northwestern University, 1966.  
B.S., Engineering (Materials Option) - University of California, Berkeley, 1964.

### Professional Experience

1994 - Present: LOYOLA MARYMOUNT UNIVERSITY, Los Angeles, CA. Professor of Mechanical Engineering. Directed and taught courses in materials processing, product design and development, statistics and nanotechnology. Consulted on glass, ceramics, metals, polymer failure and product design/manufacturing.

1989 - 1994: ROCKETDYNE / ROCKWELL INT'L, Canoga Park, CA.  
Member of Technical Staff. Initiated and directed new programs in advanced ceramics, composites and metals for rocket engine applications. Conducted failure analysis on ceramic (Si<sub>3</sub>N<sub>4</sub>), composite (C/SiC), metal (steel, Ti-alloy and Nb), and thermal barrier ceramic coatings for engine components. Performed failure of structures due to design and manufacturing.

1988 - 1989: MATERIALS SYNERGY, Boca Raton, FL.  
Principal. Consulted on ceramics, composites, coatings, metals, and the failure analysis of components. Initiated new course: "Processing and Properties of Composites."

1977 - 1988: PRATT & WHITNEY, W. Palm Beach, FL.  
Materials Engineering Specialist. Responsible for developing high temperature, light weight materials for gas turbine engines:

- Developed failure methodology for ceramic and composite components.
- Correlated processing defects with performance and design of components.
- Processed and tested glass-matrix composite structures.
- Designed, fabricated and evaluated fracture of hollow Si<sub>3</sub>N<sub>4</sub> turbine vane.
- Analyzed failure and life prediction of Si<sub>3</sub>N<sub>4</sub> blade/metal rotor design.

1974 - 1977: METCO, Inc., Westbury, NY.

Research Engineer. Developed novel high temperature ZrO<sub>2</sub>-TiO<sub>2</sub> and glass-abradable coatings. Conducted research in wear and failure of ceramic and metal coatings.

1972 - 1974: WESTERN ELECTRIC, RESEARCH CENTER, Princeton, NJ.

Member of Research Staff. Conducted processing research on MnZn ferrite materials. Predicted cause for premature failure of inductors.

1968 - 1972: NORTHWESTERN UNIVERSITY, Evanston, IL.

Research Assistant. Responsible for Ph.D. research on fracture of iron-iron oxide composites. Correlated failure with microstructure to produce composites with ten-fold increase in fracture toughness.

### **Professional Activities and Affiliations**

Expert Witness: Failure of Materials, 1994 - Present.

American Chemical Society, 2003-present.

American Association for the Advancement of Science (AAAS), 2004-present

ASM (American Society for Materials) Int'l: 1966 - Present.

American Ceramic Society (ACerS): Fellow (1994) and Member, 1964 - 2007.

Institute for the Advancement of Engineering (IAE): Fellow, 1997.

Society of Manufacturing Engineers (SME): Member, 1994 - 2003.

American Society of Engineering Education (ASEE): Member, 1994 - Present.

### **Professional Papers and Patents**

Published over 50 research papers in glass, ceramics, composites, metals and coatings.

Edited two books. Obtained U.S. Patent 4,500,483. List is available upon request.

### **Expert Witness Information**

- Expert witness (failure of materials): over 30 cases, 1994 – present.
- Served in cases: 60% for plaintiff, 40% for defense.
- All cases settled out of court.

### **Expert Witness References**

1. Grady Chandler (attorney), Law Offices of Brown, Brown, Chandler & Townsend, Garland, TX, 1-800-554-9985. Case: Kincaid v. University Games Corp., 2001.
2. Victor George (attorney), Law Offices of Victor George, Los Angeles, CA, 310-826-7999. Case 1: Ward v. University Games, et. al., 2000. Case 2: Perry v. Polytechnic, 2001.

## Fee Schedule

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### Consultant's and Expert Witness' Rates:

- Consultant's research and investigation \$180/hour  
Includes case investigation, failure analysis, library research, materials and processing specifications, counseling, interrogatories, travel time, oral and written reports.
- Expert witness' deposition and testimony \$280/hour  
Includes all work performed in delivering depositions and testifying in court, travel time.

### Other Expenses:

Actual expenses reasonably and necessarily incurred, such as travel, meals, lodging, long distance telephone charges, professional support materials, tests and analyses are in addition to the consultant / expert witness fee and will be billed to the client at cost. For automobile travel, the mileage rate charge shall be \$0.40 per mile.

### Terms:

- New accounts shall be initiated with an advanced payment.
- Client shall be billed at least monthly for consultant's services, and invoice should be payable net fifteen (15) days from date of invoice.
- All travel expenses involving airfare and hotel shall be paid in advance.
- All laboratory costs for testing & analysis shall be billed directly to the client after a cost estimate has been prepared by the consultant and approved by the client.
- Fees for depositions shall be paid in advance based on the anticipated length of the examination. Balances due, if any, shall be paid within five (5) days of the deposition.
- Fees for three (3) days time shall be paid in advance for trials outside of California and shall be paid in advance for two (2) days time for trials inside of California.
- Payment of \$1,000 retainer will engage the expert witness and should be sent to:  
Dr. Mel I. Mendelson, Mechanical Engineering Department, Loyola Marymount University, 1 LMU Drive, M.S. 8145, Los Angeles, CA 90045-2659.