

Elizabeth Aton  
SESHA Graduate Lecture  
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# Industrial Hygiene Applications in Microelectronics Operations



# Industrial Hygiene Elements

- Physical Agents
- Air Contaminants
- Etiologic Agents

# Physical Agents

- Noise/Vibration
- Ionizing Radiation
  - X-Rays
  - Radioisotopes
- Non-Ionizing Radiation
  - Ultraviolet
  - RadioFrequency
  - LASERS
- Cumulative Trauma Disorders

# Air Contaminants (1)

## Caustics and Corrosives

- Acids
  - liquids
  - gaseous
- Bases
  - liquids
  - gaseous

# Air Contaminants (2)

## Solvents

- Halogenated
- Non-Halogenated
  - Photoresists

# Air Contaminants (3)

## Oxidizers

- Hydrogen peroxide,  $H_2O_2$ 
  - Halogens
  - Oxygen
  - Others



# Air Contaminants (4)

## Metals and Miscellaneous Toxics

- Mercury, Cadmium, Tellurium
  - Arsenic
  - III-V Elements
  - Organometallics

# Air Contaminants (5)

## Gases

- Asphyxiants
- Toxics and Pyrophorics

# Etiologic Agents

- "What's Going Around"
- Bloodborne Pathogens
  - Occupational TB?