You should select from the following keyword when submitting a manuscript to Tribology Letters. If you have any questions or comments about the keywords, please contact Nic Spencer (nicholas.spencer@mat.ethz.ch).

**Tribology Letters Keywords**

**Additives, Chemistry and Performance**
- Additive Decomposition
- Additive Degradation
- Additive Depletion
- Additive Deposition
- Additive Interaction
- Additive Solubility
- Antifatigue Additives
- Antioxidants
- Antiwear Additives
- Biocides
- Corrosion/Rust Inhibitors
- Detergents
- Demulsifiers
- Dispersants
- Emulsifiers
- Extreme Pressure Additives
- Foam Control Additives
- Friction Modifiers
- Grease Thickeners
- Magnetic Particles
- Metal Passivators
- Pour Point Depressants
- Solid Lubricant Additives
- VI Improvers

**Applied Tribology, by Type of Industry**
- Aviation
- Agriculture
- Aluminum Industry
- Automotive
- Biotribology
- Cement Industry
- Economics
- Food Processing
- Forestry
- History of Tribology
- Magnetic Data Storage
- Marine
- Mining
- Oil Production
- Paper Manufacturing
- Petrochemical Industry
Power Generation
Railroad
Space
Steel Industry
Textile Manufacturing
Tribology Education

**Base Stocks, Chemistry and Performance**
- Biodegradable Base Stocks
- Cryogenic Fluids
- Fire-Resistant Base Stocks
- Fluorocarbons
- Food-Grade Base Stocks
- Liquid Crystals
- Mineral Base Stock Refining
- Mineral Base Stocks
- Organic Esters
- Phosphate Esters
- Phosphazenes
- Polyethers
- Polyglycols
- Silicate Esters
- Silicones
- Synthetic Base Stocks
- Synthetic Hydrocarbons
- Vegetable Oils

**Boundary Lubrication and Nanotribology**
- Boundary Lubrication Friction (see also, Friction)
- Boundary Lubrication Chemistry
- Boundary Lubrication (General)
- Boundary Lubrication Test Methods
- Boundary Lubrication Thermal Effects
- Boundary Lubrication Wear (see also, Wear)
- Nanotribology

**Component and Machine Tribology**
- Centrifugal Gas Compressors
- Centrifugal Hydraulic Pumps
- Compressors (General)
- Couplings - see Gears, Couplings, Etc.
- Electrical Equipment
- Engines - see Engine Tribology
- Gas Turbines - see Engine Tribology
- Gear Hydraulic Pumps
- Gears - see Gears, Couplings, etc.
- Human Joints, Replacements
- Hydraulic Drives
- Hydraulic Systems (General)
- Hydraulic Valves
- Hydrodynamic Bearings - See Hydrodynamic, etc.
- Machine Tools
Magnetic Bearings
Magnetic Data Disks (Hard, Floppy)
Magnetic Data Tapes
Magnetic Data Recording Heads
MEMS Devices
Paper Machines
Piston Gas Compressors
Piston Hydraulic Pumps
Refrigerant Compressors
Rolling Bearings - see Rolling Element Bearings
Screw Gas Compressors
Slideways
Steam Turbines
Torque Converters
Valvetrains, Cams and Lifters
Vane Pumps

**Computational and Math Methods for Tribology**
- Data Acquisition
- Dynamic Modelling
- Expert Systems
- Fluid Mechanics Methods
- Statistical Analysis
- Tribology Databases

**Contact Mechanics and Fatigue**
- Contact Mechanics
- Fatigue Analysis
- Fatigue Crack Propagation
- Non-Contact Fatigue
- Stress Analysis
- Thermal Analysis

**Elastohydrodynamic Lubrication (EHL)**
- Compliant Surface EHL
- EHL Film Geometry
- EHL (General)
- EHL with Greases
- EHL with Non-Newtonian Lubricants
- Low Elastic Modulus EHL
- Micro-EHL
- Partial-EHL, Roughness Effects
- Starvation in EHL
- Thermal Effects in EHL
- Traction

**Engine Tribology**
- Diesel Engines
- Gasoline Engines
- Gas/Jet Turbines
- Rocket Engines
- Marine Diesel Engines
Natural Gas Engines

**Friction and Energy Conservation**
Adhesion, Stiction
Brakes
EHL Friction (Traction) - see EHL
Energy Conservation
Friction Mechanisms
Friction Test Methods
Hydrodynamic Friction
Rolling Friction
Self Lubrication Friction
Solid Lubrication Friction
Static Friction
Stick-Slip
Unlubricated Friction

**Gears, Couplings, Transmissions**
Automatic Transmissions
Belt Drives
Bevel Gears
Chain Drives
Clutches
Constant Velocity Joints
Continuously Variable Transmissions (CVT)
Epicyclic (Planetary) Gears
Friction Drives
Gear Couplings
Gears (General)
Helical Gears
Hypoid Gears
Open Gears
Rack and Pinion Gears
Splines
Spur Gears
Traction Drives (IVT)
Worm Gears

**Hydrodynamic and Hydrostatic Lubrication and Bearings**
Air Bearings
Air, Gas and Vapor in Hydrodynamics
Cavitation in Hydrodynamics
Compliant Surface Bearings
Compressibility in Hydrodynamics
Film Geometry in Hydrodynamics
Flow Rate in Hydrodynamics
Foil Bearings
Human Joint Hydrodynamics
Hydrodynamic Bearings (General)
Hydrodynamic Friction - see Friction
Hydrodynamic Lubrication (General)
Hydrostatic Bearings
Hydrostatic Lubrication
Inertia Effects in Hydrodynamics
Journal Bearings
Load-Carrying Capacity
Multi-Lobe Bearings
Non-Newtonian Effects in Hydrodynamics
Porous Metal Bearings
Roughness Effects in Hydrodynamics
Slideway Bearings
Squeeze-Film Dampers
Squeeze-Film Lubrication
Stability in Hydrodynamics
Starvation in Hydrodynamics
Thermal Effects in Hydrodynamics
Tilting-Pad Bearings
Turbulent Flow in Hydrodynamics
Vapor Phase Lubrication
Viscoelasticity in Hydrodynamics

Lubricant Application and Disposal Methods
  Aerosol Lubrication
  Grease Application
  Lubricant Circulation Systems
  Lubricant Cleanup, Solvents
  Lubricant Conservation
  Lubricant Disposal
  Lubricant Reclamation
  Lubricant Recycling
  Lubricant Rerefining
  Lubricant Storage
  Lubricant Waste
  Lubrication Scheduling
  Mist Lubrication
  Oil Bath Lubrication
  Pollution
  Splash Lubrication
  Spray Lubrication
  Vapor Phase Lubrication
  Wick, Ring, Disc Lubrication

Lubricant and Grease Formulation and Performance
  Automatic Transmission Fluids
  Biodegradable Oils
  Circulating Oils
  Compressor Oils
  Coupling Lubricants
  Cryogenic Lubricants
  Diesel Engine Oils
  Ferrofluids
  Fire-Resistant Fluids
  Food-Grade Lubricants
  Gas Turbine Oils
Lubricant Properties, Chemical Analysis

Acidity
Basicity
DSC
Ferrography
Fluorescence
Fuel Dilution
Gas Chromatography
Hydrolytic Stability
Infra Red
Liquid Chromatography
NMR
Oxidation Resistance
Radiation Resistance
Spectroscopy
TGA
Thermal Stability
Voltametric

Lubricant Properties, Physical Analysis

Air Release
Bulk Modulus
Demulsibility
Density
Electrical and Magnetic Properties
Electrorheological Behavior
Emulsivity
Flash and Fire Point
Foaming
Gas Solubility
Heat Capacity
Low Temperature
Non-Newtonian Behavior
Pour Point
Rheology
Surface Tension
Thermal Conductivity
Traction, Shear Strength
Vapor Pressure, Volatility
Viscoelasticity
Viscosity
Viscosity-Pressure
Viscosity-Temperature

Maintenance, Monitoring and Lubricant Problems
Chemical Contamination
Cleanliness
Computer Use in Maintenance
Equipment Monitoring
Failure Analysis
Filtration
Humidity
Hydrolysis
Incompatible Fluids
Life Prediction Methods
Lubricant Degradation
Maintenance
Oil Condition Monitoring
Oxidative Degradation
Particulates
Water Contamination

Materials in Tribology (Solids)
Aluminum
Beryllium
Borides
Carbon, Graphite
Carbides
Ceramic Composite
Ceramics
Chromium
Cobalt
Copper
Diamond
Elastomers
Ferrous Alloys, Steel
Gallium
Glass
Gold
Iron
Lead
Molybdenum
Nickel
Nitrides
Non-Ferrous Alloys
Oxides
Polymers (solid)
Powder Metals
Self-Lubricating Composites
Silicon
Silver
Tin
Titanium
Tungsten

**Metalworking and Metalworking Fluids**
- Boring
- Casting
- Cutting
- Cutting Fluids
- Drawing Fluids
- Drawing, Extruding
- Finishing
- Forging
- Forging Fluids
- Forming
- Grinding
- Grinding Fluids
- Honing
- Jet Cutting
- Lapping
- Milling
- Polishing
- Quenching Fluids
- Rolling
- Rolling Fluids
- Tapping
- Turning

**Rolling Element Bearings**
- Ball Bearings
- Ball Screw
- Cylindrical Roller Bearings
- Linear Rolling Bearings
- Needle Roller Bearings
- Precision Rolling Bearings
- Rolling Element Bearings, General
- Rolling Element Bearing Noise
- Spherical Roller Bearings
- Tapered Roller Bearings

**Seals and Sealing Technology**
- Bellows
- Brush Seals
Elastomeric Seals
Elastomeric Static Seals
Face Seals
Gaskets
Labyrinth Seals
Lip Seals
Magnetic Seals
Mechanical Seals
O-Rings
Packing Seals
Piston Rings
Reciprocating Seals
Rod Seals
Rotary Seals
Sealants
Static Seals
Two-Phase Seals
Viscoseals

Solid and Self Lubrication
Graphite
Jewel Bearings
Molybdenum Disulfide
PTFE
Self Lubrication
Self Lubrication Friction - see Friction
Self Lubricating Bearings
Solid Lubricants
Solid Lubricated Bearings
Solid Lubrication
Solid Lubrication Film Thickness
Solid Lubrication Friction--see Friction
Solid Lubrication Mechanisms
Solid Lubrication Wear--see Wear
Spherical (pivot) Bearings

Surface Technology and Analysis
Additive-Deposited Films
AES(Auger)
AFM
Annealing
Barrier Films
Carburizing
Chemical Analytical Techniques
Coatings, Friction-Reducing
Coatings, Wear-Resistant
Corrosion
Dynamic Light Scattering
EDS
EDXRF
EELS
EPMA
ESCA
EXAFS
FTIR
Hardening
Hardness
Hydrodynamics, Roughness Effects - see Hydrodynamics
Ion Implantation
Metallurgical Analysis
Mossbauer
Nitriding
Optical Microscopy
Partial-EHL, Roughness Effects - see EHL
Raman
RBS
Running-In
SEM
SIMS
STM
Surface Energy
Surface Modification
Surface Roughness
Surface Roughness Analysis and Models
Surface Roughness Measurement Methods
TDS
TEM
XANES
XPS
XRD

**Toxicology and Hygiene**
Food Contact
Hygiene
Lubricant Microbial Degradation
Safety
Toxicology

**Wear and Failure**
Abrasive Wear
Adhesive Wear
Bench Wear Tests
Cavitation Erosion
Corrosive Wear
Delamination Wear
Electrical Erosive Wear
Equipment Wear Tests
Erosive Wear
Fatigue
Fretting
Galling
Impact Wear
Oxidative Wear
Rolling-Contact Fatigue
Scoring, Scuffing  
Self-Lubricated Wear  
Solid Lubricated Wear  
Triboemission  
Unlubricated Wear  
Wear Mechanisms  
Wear Particle Analysis  
Wear/Failure Testing Devices

**Other**

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