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This Document is intended to provide a sampling of SFA (Surface Forces Apparatus) related publications and attempts to correlate a given reference to the SFA 2000 configuration that was used or could have been used to perform work cited based on an older SFA model. The SFA configuration (orange columns) are subdivided by Top Mounts which host the upper SFA surface and attaches to the top of the SFA Main Chamber, and Bottom Mounts which host the lower SFA surface and reside inside the SFA Main Chamber. Also shown is an approximate categorization (green columns) of the type of work performed in each reference. The excel version of the file has an additional column with links to each paper.

 $Please feel free to contact \,me-\,I'm \,sure \,we \,can \,configure \,our \,SFA \,systems \,to \,meet \,your \,research \,needs.$

Jeff Scott CEO SurForce LLC

Reference					SFA2000 equipment explicitly used 'X' or attachments needed to perform similar experiments 'O' in an SFA2000 System. (Att. = Attachment) Top Mounts Bottom Mounts									perform an SFA2000 Topics of Interest nt)													
Title	Journal	Year	Paper Hyperlink	Background Reference	SFA Review (tehanique or hardw	Piezo Top Mount Att.	Friction Device Att.	Electrochemical (EC) Top Mount Att.	3D Actuator / Sensor Att.	Main Translation Stage Att.	Bimorph Vibrator Att.	1D Bimorph Slider Att.	Viscosity of liquids	Simulations/Modeling	Biological/Biomolecular	Colloids	Cavitation	Polymers near Tg	Polymers / Polymer Brushes	Friction &/or Lubrication	Instabilities / Patterns	Adhesion	Temperature Effects	Pressure Solution/ Dissolution non-FECO Friction/Adhesion			
Understanding the surface properties and rheology of a silica suspension mediated by a comb-type poly(acrylic acid)/poly(ethylene oxide) (PAA/PEO) copolymer: effect of salinity	Soft Matter	2018	link			х				х									х								
Protein-Resistant Property of Egg White Ovomucin under Different pHs and Ionic Strengths	J. Agric. Food Chem.,	2018	link			х				x					х	х											
Surface chemical heterogeneity modulates silica surface hydration	PNAS	2018	link			х				х												х					
Friction forces of saliva and red wine on hydrophobic and hydrophilic surfaces	Food Research International	2018	<u>link</u>				х					х			х					х							
Multivalent ions induce lateral structural inhomogeneities in polyelectrolyte brushes	Science Advances	2017	<u>link</u>			х				х						х			х			х					
Tuning underwater adhesion with cation-π interactions	Natrue Chemustry	2017	<u>link</u>			х				х					х							х					
Long range electrostatic forces in ionic liquids: controversies and opportunities	Chem. Commun.	2017	link			х				x						х											
Surface force measurements and simulations of mussel-derived peptide adhesives on wet organic surfaces	PNAS	2016	link			х				х				х	х							х					
Probing Molecular Interactions of Asphaltenes in Heptol Using a Surface Forces Apparatus: Implications on Stability of Water-in-Oil Emulsions	Langmuir	2016	link			х				х											х						
Analyzing refractive index profiles of confined fluids by interferometry part II: Multilayer and asymmetric systems	Analytica Chimica Acta	2016	link	х	х	х				х				х													
On the conformational state of molecules in molecularly thin shearing films	PNAS	2015	link	х	х																						
Real-Time Monitoring of Aluminum Crevice Corrosion and Its Inhibition by Vanadates with MBI in a SFA	J. Electrochemcial Soc.	2015	link			х				х														х			
Real-time MBI reveals complex deformations of metal-organic-framework upon humidity adsoroption/desorption	J. Phys. Chem. C	2015	link			х				х														х			
Surface-initiated self-healing of polymers in aqueous media	Nature Materials	2014	link			х				х					х									х			
Analyzing refractive index profiles of confined fluids by interferometr	Analytical Chem.	2014	link	х	х	х				х				х													
Ionic liquids behave as dissociable polar liquids	PNAS	2013	link			х		х		х						х											
Surface Forces and Nanorheology of Molecularly Thin Films	Nanotribology & Nanomechanics II	2011	link	х		х				х			х			х	х	(х	х	х	х	х	х			
Measurement and characterization of 'resonance friction' at high sliding speeds in a model automotive wet clutch	Tribology Letters	2011	link						х	2	۲									х							
Adaptive mechanically controlled lubrication mechanism found in articular joints	PNAS	2011	link			х	х			х		х			х									х			
High-Speed Friction Measurements Using a Modified Surface Forces Apparatus	Tribology Letters	2011	link						х	,	(х								х							
Design Rules for Biomolecular Adhesion: Lessons from Force Measurements	Annual Review of Chem. and Biomolecular Eng.	2010	link	х											х							х					
Recent advances in the surface forces apparatus (SFA) technique	Reports on Progress in Physics	2010	link		х	х	х		х	x :	x	х															
Role of electrochemical reactions in Pressure Solution	Geochimica et Cosmochimica Acta	2009	link			х		х		х										х				х			
Interaction forces and adhesion of supported myelin lipid bilayers modulated by myelin basic protein	PNAS	2009	link			х				х					х							х					
Force Amplification Response of Actin Filaments Under Compression	PNAS	2009	link			х				х					х												
Transient Interfacial Patterns and Instabilities Associated with Liquid Film Adhesion and Spreading	Langmuir	2007	link			х				х			х						х		х	х					
Adsorption, Lubrication, and Wear of Lubricin on Model Surfaces: Polymer Brush-Like Behavior of a Glycoprotein	Biophysical Journal	2007	link			0				o		0			х					х		х					
Triboelectrification between smooth metal surfaces coated with self-assembled monolayers (SAMs).	J. Phys. Chem. B	2007	link			х	х			х		х								х		х					
Extending the surface force apparatus capabilities by using white light interferometry in reflection	Review of Scientific Instruments	2003	link	х	х																						

The extended surface forces apparatus. Part III. High-speed interferometric distance measurement	Review of Scientific Instruments	2003	link	х	x																		
Evaporation and instabilities of microscopic capillary bridges	PNAS	2003	<u>link</u>			х			2	х										х			
Debye length and double-layer forces in polyelectrolyte solutions	Macromolecules	2002	link	х		х			,	х			х		х								
Impact of polymer tether length on multiple ligand-receptor bond formation	Science	2001	link			х			2	х			x x	(х		
Direct measurements of multiple adhesive alignments and unbinding trajectories between cadherin extracellular domains	Biophysical Journal	2001	link			х			,	х			,	(T	х		
Direct measurement of depletion attraction and thin-film viscosity between lipid bilayers in aqueous polyethylene oxide solutions	Macromolecules	1998	link			х			2	х		х		х						T			
Direct Measurement of a Tethered Ligand-Receptor Interaction Potential	Science	1997	link			О			(0			,	(T	х		
Thin film rheology and tribology of confined polymer melts: contrasts with bulk properties	Macromolecules	1997	link				o				o	х						х	х				
Topographic information from multiple beam interferometry in the Surface Forces Apparatus	Langmuir	1997	link	х	х															T			
Thin film rheology and tribology of chocolate	J. Food Science	1997	link			О	o		(0	o			х					х				
Thin film morphology and tribology of food emulsions: a study of three mayonnaise samples	J. Food Science	1997	link			О	o		(0	o			х					х				
Interactions of Silica Surfaces	J. Colloid Interface Sci.	1994	link	х		О	0		(0	o								х		х		
Contact Electrification and Adhesion between Dissimilar Materials	Science	1992	<u>link</u>			o			(0											х		
Adhesion and Short-Range Forces Between Surfaces: New Apparatus for Surface Force Measurements [the SFA 3]	J. Mater. Res.	1990	<u>link</u>	х	х																		
Surface Forces and Viscosity of Water Measured Between Silica Sheets	Chem. Phys.Lett.	1989	link	х																			
Using Thiol-Gold Bond Formation To Bridge Surfaces with a Polymer Brush: SFA Experiments and MD Simulations	Macromolecules	2013	link			х			,	x			х					x			х		
Dynamics of force generation by confined actin filaments	Soft Matter	2013	link			х			,	x			,	(
Investigation on the molecular shear-induced organization in a molecularly thin film of n-hexadecane	Tribology Letters	2013	<u>link</u>				х				х			х									
A brief history of intermolecular and surface forces in complex fluid	Langmuir	2013	<u>link</u>	х									х										
Adaptive Hydrophobic and Hydrophilic Interactions of Mussel Foot Proteins with Organic Thin Films	PNAS	2013	link			х			,	x			,	(
A Mussel-Derived One-Component Adhesive Coacervate	Acta Biomateriala	2014	link		х								,	(
Elucidating the intersection of interfacial forces and (electro)chemical reactions	J. Phys. Chem. B	2013	link		x			х	2	х				х	х				х		х		
Brushes of strong polyelectrolytes in mixed mono- and tri-valent ionic media at fixed total ionic strengths	Soft Matter	2013	<u>link</u>					х	,	x								x					
Nanomechanics of Cation-pi Interactions in Aqueous Solution	Angewandte Chemie International Edition	2013	<u>link</u>			х			,	x					?								
Normal and shear interactions between high grafting density polymer brushes grown by atom transfer radical polymerization	Soft Matter	2013	link			х	х				х							x					
Polymer Brushes under High Load	PLOS ONE	2013	link	х		х			,	x								х					
Measurements of anisotropic (off-axis) friction-induced motion	Advanced Materials	2012	link	х					х										х				
Friction at the liquid/liquid interface of two immiscible polymer films	Langmuir	2009	link				х				х	х						x	х				
Contact mechanics with adhesion: Interfacial separation and contact area	Europhysics Letters	2008	<u>link</u>	х																	х		
3D Force and Displacement Sensor for SFA and AFM measurements	Langmuir	2008	<u>link</u>	х	X				х		х								х		х		
Transient Surface Patterns and Instabilities at Adhesive Junctions of Viscoelastic Films	Macromolecules	2007	<u>link</u>			x			2	x		х						x		x	х		
Friction studies of polymer lubricated surfaces	Macromolecules	2007	link			х	х				х							х	х	х			
Role of nanometer roughness on the adhesion and friction of a rough polymer surface and a molecularly smooth mica surface	Tribology Letters	2007	link			o			(0	o							х	х		х		
Transient surface patterns during adhesion and coalescence of thin liquid films	Soft Matter	2007	<u>link</u>			х			,	x								х		х	х		
Adhesion and detachment mechanisms of sugar surfaces from the solid (glassy) to liquid (viscous) states	PNAS	2006	<u>link</u>			х			,	x						х	х			х	x :	х	х
Limit cycles in dynamic adhesion and friction processes: a discussion	Journal of Adhesion	2006	link	х		х	х		,	x	х								х		х		
The Deformation and Adhesion of Randomly Rough and Patterned Surfaces	J. Phys. Chem. B	2006	link	х		х			2	х								х			х		
Adhesion and Friction of Polystyrene Surfaces around Tg	Macromolecules	2006	link			х			,	х							х	х	х		х		
Adhesion and Friction of Polymer surfaces: The effect of chain ends	Macromolecules	2005	link	х		х	х				х						х	х	х		х		
Large deformations during the coalescence of fluid interfaces	Physical Review Letters	2004	link	х		х			,	x		х						х			х		
Adhesion and friction mechanisms of polymer-on-polymer surfaces	Science	2002	link				х				х							х	х		х		
Tribology of shearing polymer surfaces. Part II – Polymer (PBMA) sliding on Mica	J. Phys. Chem	2000	link	П		х					х							х	х		х		

Dynamic Behavior of Confined Branched Hydrocarbon Lubricant Fluids under Shear	Macromolecules	2000	<u>link</u>	х	х					x						х				
Tribology of shearing polymer surfaces. Part I – Mica sliding on polymer (PnBMA)	J. Phys. Chem. B	1999	<u>link</u>			х				х					х	х		х		
Temperature and time effects in the 'adhesion dynamics' of poly-butyl-methacrylate (PBMA) surfaces	Langmuir	1998	<u>link</u>	х	o			o						х	х			х	х	х
Experimental and theoretical investigations of stick-slip friction mechanisms	Physics of Sliding Friction, NATO	1996	<u>link</u>	х		o				0						х				
Origin and characterization of different stick-slip friction mechanisms	Langmuir	1996	<u>link</u>	х	0	0				0						х				
Mechanism of cavitation damage in thin liquid films: collapse damage versus inception damage	Wear	1992	link		0			o					х				х			
New Mechanism of Cavitation Damage	Science	1991	link		o			o					х		х					
Interactions between Surfaces Bearing End-Adsorbed Chains in a Good Solvent	Macromolecules	1990	<u>link</u>	х											х					
Shear Properties and Structure of Simple Liquids in Molecularly Thin Films: the Transition from Bulk (Continuum) to Molecular Behavior with Decreasing Film Thickness.	J. Colloid Interface Sci.	1989	link			0				0	х					х				
Measurements of Dynamic Interactions in Thin Fluid Films: the Transition from Simple to Complex (Non-Newtonian) Behavior	J. Polymer Sci., Part B: Polymer Physics	1989	link	х	0			o			х				х	х		х		
Forces between surfaces bearing terminally anchored polymer chains in good solvents	Nature	1988	link	х											х					
Measurements of the Viscosity of Thin Films Between Two Surfaces With and Without Adsorbed Polymers	Colloid and Polymer Science	1986	link	х	0			o			х				х					
Measurement of the Viscosity of Liquids in Very Thin Films.	J. Colloid and Interface Sci	1986	<u>link</u>		0			o	О		х									