

Bibliography of Soft X-ray Microscopy (UPDATE of supplemental material for Polymer invited review)

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Composition and orientation probed in real and reciprocal space, Polymer **49** (2008) 643-67

Materials

P – polymer; M – material (non-polymer); E – environmental; B - biological

Types

R – review; I – instrumentation; T – technique; A - application

Techniques

CXDI – coherent X-ray diffraction imaging

CXRM – contact microscopy

DIXH – Digital in-line X-ray holography

ESCA Microscopy = SPEM (Elettra pub list)

FTH - Fourier transform holography

Nanospectroscopy = XPEEM (Elettra pub list)

PEEM – photoemission electron microscopy

PT - ptycography

RSoXS – resonant Soft X-ray Scattering (extends XRM spatial resolution)

SFXM – scanning focused X-ray microscope

SPAM – scanning photo-excited Auger microscope

SPEM – scanning photoemission X-ray microscopy

SP-STXM – STXM with scanning probe pickup

STXM – scanning transmission X-ray microscopy

TR-PEEM – time resolved PEEM

TXM – full field transmission X-ray microscopy

Polymer and materials abbreviations

Alb, HSA	human serum albumin
ABS	polybutadiene-acrylonitrile blend
DVB55	divinylbenzene (45% monovinylbenzene)
EGDMA	ethylene glycoldimethylacrylate
EVA	poly (ethylene-co-vinyl alcohol
Fg	fibrinogen
F8BT	poly(9,9'-dioctylfluorene-co-benzothiadiazole)
LDPE	low density polyethylene
Kraton	type of rubber
MDI	merhlyene di(isocyanate)
MMT	montmorillonite clay
Nylon-6	poly(ϵ -caprolacatam)
PAR	polyacrylate
PBMA	poly-n-butyl-methacrylate
PPrS	poly-bromo-styrene
PC	polycarbonate
PET	poly(ethyleneterephthalate)
PMMA	polymethylmethacrylate
PMGI	poly dimethylgultarimide
PAA	polyacrylic acid
PE	polyethylene
PEP	poly(ethylene- <i>alt</i> -propylene)
PI	polyisoprene
PLA	polylactide (polylactic acid)
PP	polypropylene
PP-g-MA	polypropylene-graft maleic anhydride
PPTA	poly(p-phenylene terphthalamide) = Kevlar TM
PS	polystyrene
PTMO-ED	polytetramethylene oxide + ethylenediamine + MDI)
RBC	poly[(styrene- <i>r</i> -isoprene)'- <i>b</i> -(styrene- <i>r</i> -isoprene)''], (S/I)'- <i>b</i> -(S/I)'', copolymer; ' = 75/25; '' = 50/50 (wt %) S/I block compositions
SEBS	poly(styrene- <i>b</i> -ethylene butylene- <i>b</i> -styrene)
TDI	toluene di(isocyanate)
TFB	poly(9,9-dioctylfluorene-co-N-(4-butylphenyl)diphenylamine)
Vectra	poly(butylene terephthalate)

code	materials	type	tech	species	Comments
1969SR	M	I	TXM		First zone plates designed for XRM
1972HH	M	I	pinhole		2 um resolution (at NSLS)
1974K	M	I	STXM		zone plate theory
1976NRS	M	I	TXM	<i>Eremosphaera viridis</i> ,, cotton fibre	First synchrotron TXM (at DESY)
1977SK&a	B	T	STXM		radiation dose (electron vs. X-ray)
1977SK&b	B	T	STXM		water window theory
1980Ka	B	A	STXM		elemental mapping
1980Kb	B	I	STXM		radiation damage
1980KS	B	R	STXM		early review of soft X-ray microscopy
1980RK&	B	I	STXM		UV ring STXM – first results
1980SR&	B	R	TXM		
1984RK&	B	A	STXM		UV ring STXM
1985HK&	B	R	STXM, TXM		popular review
1985KR	B	I, R	STXM		first NSLS microscope
1986JK&	B	I	STXM		U15 BM STXM
1986RS&	B	I	STXM		plans for X1A STXM
1987JK	B	R	STXM		
1987YH	M	I	STXM		zone plate theory
1988DH&	P	A, T	RSoXS	sulphonated PS	resonant scattering
1988RS&a	B	I	STXM		first X1A result (?)
1988RS&b	B	I	STXM		UV ring STXM
1988SS&	M	I	STXM		interferometer encoder for STXM
1988YH	M	I	STXM		ZP fabrication
1989BR&	B	I	STXM		
1989RI&	B	A	STXM	zymogen granules	
1990AK&	P	I	STXM		
1990KA&	B	R	STXM		
1990RA&	B	R	STXM		
1990RB&	M	I	STXM		NSLS X1a STXM
1990RB&b	M	I	STXM		X1a beamline and undulator
1990RCa	P	A, T	RSoXS	sulphonated PS	resonant scattering
1990RCa	M	A	RSoXS	Amorphous polymer films	
1990RCb	P	A, T	RSoXS	sulphonated PS	resonant scattering

code	materials	type	tech	species	Comments
1990RCb	M	A	RSoXS	Semicrystalline polymer films	
1991AK&	M	I	SPEM	circuits	
1991DC&	B	A	SPEM	neurons	
1991HKS	B	R	STXM, SPEM		popular review
1991JR&	P	A, T	RSoXS	Langmuir-Blodgett films	soft X-ray non-resonant scattering
1991JR&	M	A	RSoXS	Langmuir-Blodgett films	
1991JW&	B	I	STXM		
1991M	M	R	PEEM	Hg lamp Cu/Mo(100)	
1991MD&	B	A	SPEM	neurons	
1991T	M	R	PEEM, SPEM		
1991TG&	M	I	STXM		zone plate fabrication
1992A	R,I	T	SPEM		
1992AK&a	M	I	SPEM		astigmatism correction
1992AK&b	M	I	SPEM		
1992AK&c	M	A,I	SPEM		
1992AZ&	P	A	STXM	PAN, PS, PP	
1992B	B	A	STXM	Ca in bone	
1992BA&	B	A	STXM	Ca mapping in cartilage	
1992BB&	B	A	STXM	collagen fibrils	
1992BB&a	B	A	STXM	Ca mapping in cartilage	
1992BB&b	B	A	STXM	Ca mapping in cartilage	
1992BF&	B	A	STXM	Ca mapping in cartilage	
1992CKW	P	I	STXM		resolution evaluation
1992DK&	B	A	PEEM	neurons	
1992FP&	B	T	TXM/TEM	radiation damage to cells	
1992GM&	B	A	STXM	organelles in cells	
1992GP	B	A	STXM	whole cell imaging	
1992GP&	B	A	STXM	whole, wet tissue imaging	
1992GR	B	A	STXM	protein secretion from zymogen granules	
1992J	B	I	STXM		
1992JKW	I	T,R	TXM, STXM		resolution
1992JL&a	B	I	STXM		luminescence detection
1992JL&b	M	I	STXM		ZP replication (litho)

code	materials	type	tech	species	Comments
1992KA&a	B	R	STXM		coherence effects
1992KA&b	M	I	SPEM		
1992LK&	B	T	STXM		3d imaging by stereo microscopy
1992LR&	I	I	STXM		NSLS X1A undulator and beamline
1992LTJ	B	T	STXM/TXM	radiation damage	
1992LW&	B	T	STXM		steromicroscopy
1992M	I	T	STXM, TXM		phase, dark field
1992PG	B	T	STXM	live cells	
1992RGL	B	T	STXM		protein transport
1992WJ&a	B	T	STXM	chromosomes	radiation damage
1992WJ&b	B	T	STXM	chromosomes	
1992WJ&c	B	T	STXM	chromosomes	
1992WS&	B	A	TXM		
1992ZJW	B	T	STXM		deconvolution image enhancement
1993AH	P	A	STXM	polyimide	Dichroism mapping
1993AH	P	A,T	STXM	Kevlar	dichroism
1993AJ&	B, P	R	STXM		
1993BF&	B	A	STXM	myofibrils	radiation damage
1993CM&	I	I	SPEM		Maximum
1993DD&	B	A	PEEM	Al in neurons	
1993DH&	B	A	PEEM	neurons	
1993DM	B	R	PEEM	neurons	
1993DP&a	B	A	SPEM	neurons	
1993DP&b	B	A	SPEM	neurons	
1993JL&	B	T	STXM		luminescence microscopy
1993SW&	M	T	PEEM	first XMCD imaging	
1993WZ&	B	A	STXM	wet chromosome imaging	
1994AH&	P	A, R	STXM		dichoism
1994BC&	E	A	STXM	coal	
1994BD&	B	A	STXM	Ca in bone	
1994D	B	A	PEEM	neurons	
1994DC&	B	R	PEEM		
1994DD&	B	A	PEEM	Al in metals	
1994DM&a	B	A	PEEM	Al in neurons	

code	materials	type	tech	species	Comments
1994DM&b	B	A	PEEM	Al in neurons	
1994HM&a	B	T	STXM		microtomography
1994HM&b	B	T	STXM		microtomography
1994KA&	B	R, I	STXM	Na salicylate	luminescence
1994RC	M	A, R	SPEM, PEEM	GaAs, Al-Cu-S, XMCD	
1994T	I,M	A	PEEM	first XMCD PEEM	
1994ZA&	P	I, A	STXM		micro-XANES demonstrated
1995AH&	P	A	STXM	various polymers	
1995AS&	P	R	STXM	PS-PAN-polypropylene, PC-PET, Kevlar, PUR	
1995B	B	A	STXM	mapping Ca in tissue	
1995BB&	B	A	STXM	biological Calcium phosphates	
1995CB&a	E	A	STXM	coal	
1995CB&b	E	A	STXM	C, Ca, Cl in coal	
1995CB&c	E	A	STXM	coal	
1995CJW	B	I	STXM		CCD detector
1995DD&	B	A	PEEM	neurons	UV-ashed samples
1995GBR	B	A	STXM	zymogen granules	
1995GR	B	A	STXM	zymogen granules	
1995HT&a	B	T	STXM		microtomography
1995HT&b	B	I	SPEM		
1995KJH	B	R			
1995KK&a	M	I	SPEM		NSLS SPEM
1995KK&b	M	A	SPEM		
1995KK&c	M	A	SPEM		
1995MC&	B	R	STXM		
1995MDC	B	R	PEEM		
1995MH&	B	T	STXM		microtomography
1995SC	B,P	R	STXM		
1995TD&	M	R	PEEM, SPEM	PAN, magnetic samples	
1995WJ&	B, P	R,B, P	STXM		NSLS STXM review
1995ZF&	I, M	A	scan-SXM	Gd ₂ O ₂ S:Pr phosphor	
1995ZJ&	B	I	STXM		
1996AC&	M	A	PEEM	Pt/GaP(001) interface	

code	materials	type	tech	species	Comments
1996AS&	P	A	STXM	LC polyester, LDPE/PET/Kraton. PC/ABS	
1996CB&	B, P	A	STXM	sporinite in coal	
1996CF&	B	T	STXM		dark field, immuno-gold labels
1996CJW	M	I	STXM		zone plate fabrication
1996DL&	B	I	PEEM	Transmission by PEEM	
1996DM&	B	A	PEEM	Co in granule cells	
1996J	B	R	STXM		
1996JC&	B, P	R	STXM		X1A STXM review
1996K	R	A	TXM, SM		
1996KY&	B	A	TXM	COS cells; Mn enhanced	
1996MAS	B	R	PEEM		
1996MKV	M	I	SFXM	mirror focused system	instrument , luminescence detection
1996OJ&	B	I	STXM		cryo sample preparation
1996SA	P	A	STXM	polyimide	Dichroism mapping
1996UH&	P	A	STXM	polyurethane characterization	
1996VF&	M	R, I	SFXM	ceramics, porous Si	luminescence, PE, transmission detection
1996WA&	B, P	R, I	STXM		NSLS X1A revised beamline
1996WH&	B, P	R, I	STXM		NSLS X1ASTXM IV design
1996ZB&	B	A	STXM	Sperm (DNA, protein)	
1997A	P	R	STXM		
1997AD&	B	A	PEEM	Boron Neutron Capture Therapy	
1997AS&	P	I, R	STXM, SPEM	PS, PC, PE, PP, PET, PAR, Kevlar (PPTA), PS, PU, polyester, Nylon-6, MDI. SAN, TDI, (LDPE, PET, Kraton)-blend; PC-ABS blend PUR, polyurea. BM, B2, B0, LC-polyester, ,ZDDP	NSLS polymer & tribology review (Ade)
1997BK&	M	I, A	(L) PEEM	Ag/Si	
1997BK&a	B	A	STXM	tissue	
1997BO&	B	A	STXM		amino acid spectroscopy
1997BS&	M	A	STXM	silica	colloids
1997BY&	M	I	STXM+	collimator after ZP	design
1997CD&	P	R	PEEM		

code	materials	type	tech	species	Comments
1997CM	M	I	SPEM	various	
1997D	B	R	PEEM		
1997DC&	B	T	PEEM		Effect of ashing
1997DG&	B	A	PEEM	Boron NCT	
1997DM	B	A	PEEM	neurobiology	
1997DMT	E	A	PEEM	ilmenite	
1997FW&	M	I	PEEM	SMART	
1997H	M	A	PEEM	high-Tc superconductors	
1997HS&	M	A	PEEM	XMCD, FeNi alloys	
1997JZN	M	I	SPEM	Si oxides	
1997MB&	M	A	PEEM	various	
1997MC&	M	I,R	SPEM	Au/Si, MoO ₃ /sapphire,	
1997MD	B	A,T	PEEM	neurobiology	
1997MG	M	I	PEEM	Ag/Cu	angle-resolved PEEM (lab)
1997MGS	M	I	PEEM	Wien filter	
1997MR&	M	I	XPEEM	various	
1997RH&	P	A, T	STXM	polyethylene terephthalate	damage rate relative to EM
1997SF&	M	A	PEEM	XMCD, FePt alloy	
1997SJT	M	I	STXM		Lucent zone plate fabrication
1997SL&	P	A	STXM		
1997SS&	M	A	PEEM	TiSi test (PRISM)	
1997TD&	M	I	PEEM	PRISM	
1997V	M	I	SFXM	luminescence	Hasylab mirrors
1997WA&	P, M	I	STXM, PEEM	Kevlar, PU	
1997WW&	M	I	SPAM	scanning Auger, undulator	
1998A	P	R	STXM, PEEM	PC, PET, PPTA, PAR, PS, SAN, Nylon-6, PP, PE; LDPE, PET, Kraton; Liq. crystal polyester; Kevlar, magnetic domains; wood; coke	
1998Ab	P	R	STXM, PEEM		dichroism
1998Ac	P	A	STXM	PET, Vectra™ blend	
1998AW&	P	A	PEEM		dewetting
1998AY&	I	R	PEEM	FEL based PEEM metals	
1998BB&	B	A	STXM	sperm	

code	materials	type	tech	species	Comments
1998BK&	B	A	STXM	bone	
1998BO&	B	A	STXM	amino acids	
1998CA&	M	A	STXM	vitronite	luminescence alteration
1998CD&	P	A	PEEM	polyimides	orientation, dichroism
1998DC&	B	I	PEEM		Mephisto
1998DG&	B	T	PEEM	Transmission by PEEM	
1998FC&	B, P	R, I	STXM		NSLS X1ASTXM IV design
1998FK&	E	A	STXM	interplanetary dust	
1998FR&	B	A	STXM	Axon	
1998GR&	B	A	PEEM	Boron NCT	
1998JK	B,P	R	STXM, TXM		review
1998JMW	B	R	STXM		comp. to electron microscopy
1998KK&	M	I	SPEM		SRRC SPEM project
1998KW&	P	A	STXM	PAN heat treatment	
1998MJ&	B	I	STXM	cell tomography	cryo STXM instrumentation
1998MU	B	I	TXM	wet cell	instrument
1998SA&a	P	A	PEEM		dewetting
1998SA&b	M	A, R	PEEM	various	
1998SB&	P	A	STXM	PET-Vectra™	Mechanical blends
1998SH&	I	R	PEEM	leem, leed, peem metals	
1998SJT	M	I	STXM		zone plate fabrication
1998SS&	M	A	PEEM	tribology – hard disk wear	
1998WF&a	P	I, R	STXM		ALS BL 7.0 first instrument
1998WF&b	M	I	PEEM	SMART design description	
1998WJ	B	I	CXRM		contact; contrast versus resolution
1998ZM&	M	A	PEEM	Boron carbide	
1998ZZ&	M	I	SPEM		
1999AP&	I	T	PEEM	PEEM2 (ALS) instrument	
1999AS&a	M	A	PEEM	hard disk wear	
1999AS&b	M	A	PEEM	hard disk wear	
1999AW&	P	A	STXM	PS/PMMA	Phase segregation
1999CS&a	M	A	PEEM	ZDDP tribology	
1999CS&b	M	A	PEEM	ZDDP tribology	
1999DG&	B	T	PEEM		Ashing by UV/ozone

code	materials	type	tech	species	Comments
1999GS&	P	A	STXM	2,5-diphenyl-1,3,4-oxadiazole films	
1999HS&	I	R	SPELEEM	FET junctions	
1999HT&a	P	A	STXM	polyurea capsules, PS-PI layers	
1999HT&b	P,B	A	PEEM	Protein - polyurethane studies	
1999J	B	R	STXM	cell biology	
1999JN	E	A	STXM		
1999KM&	M	A	TXM	ASR gel	Hydration kinetics & mechanisms
1999M	M	I	STXM	luminescent probes	
1999MH&	P	A	PEEM	polypyrrole, defects	
1999MZ&	M	A	PEEM	Boron carbide nanowires	
1999NA&	E	A	STXM	colloid emulsions. milk	
1999PJP	M	I	STXM		phase contrast
1999RK&	E, B	A	STXM, TXM	Mn, Fe biomineralization	
1999SG&	P	A	PEEM	PS/PBMA	
1999SP&	M	I	PEEM		20 nm resolution
1999SS&	P	A	STXM	PMMA / PI blend	Mechanical blends
1999TD&	E, B	A	STXM, TXM	Mn, Fe biomineralization	
1999UH&	P	A	STXM	polyurethanes	
1999ZL&	P	A	STXM	PS/PMMA	confinement induced miscibility
2000SC&	M	A	STXM	Nanopillar spin valves	Spin injection dynamics
2000A	B	R		many	
2000AO&	M	I	STXM		CXRO zone plate fabrication
2000BR&a	B	T	TXM		Compact water window TXM
2000BR&b	B	T	TXM		Compact water window TXM
2000C	B	A	STXM	lignin, cellulose	modern wood (oak, cedar)
2000DG&	B	I	PEEM		wet samples by inverted PEEM
2000EH&	M	A	SPEM	Cu(In, Ga)Se ₂ films	
2000FB&	M	I	STXM		STXMIV, segmented detector
2000GA&	B	T	PEEM		Charging & effects on imaging
2000GKM	M	A	TXM	cement	Hydration kinetics & mechanisms
2000GP&a	B	T	PEEM		Ashing effects on cells
2000GP&b	B	A	PEEM	BSH effect on glioblastomas	
2000JA&	B,E	R	STXM		review of NSLS program
2000JW&	P	I	STXM		Stack method

code	materials	type	tech	species	Comments
2000Ka	M	I, R	SPEM	surface & interfaces	
2000Kb	M	I, R	SPEM	surface & interfaces	
2000KG&	M	A	SPEM	(Ni,Ag)/Si(111)	
2000KJ&	B	I	STXM		sealed wet cell
2000KW&	B	I	STXM		cryo tomography
2000LD&	B,E	A	PEEM	Sulfate reducing bacteria	
2000LG&	M	A	SPEM	O at Pt/YSZ interface	
2000MO&	B	I	STXM		Cryo microscopy
2000NA&	E	A	STXM		
2000ND&	M	A	SPEM	laser annealed CdTe	
2000NJ&	B	I	STXM		wet cell
2000NS&	M	A	PEEM	AFM, FM coupling - pinning	
2000OJ	E	T	STXM		principle component analysis
2000PJ&	B	T	STXM		phase contrast: expt-simulation comparison
2000PK&	E	A	STXM	Mn, Fe particles ox st.	
2000RDD	E	A	STXM	colloids	
2000SA	M	A, R	PEEM	XMCD, tribology	
2000SA&	P	A	STXM		Cryo-mechanical blends
2000SA&a	P	A	STXM	PMMA, PI, poly(ethylene- <i>alt</i> -propylene)	Cryo-mechanical blends
2000SA&b	P	A	STXM	PMMA, PI, poly(ethylene- <i>alt</i> -propylene)	Cryo-mechanical blends
2000SA&c	P	A	STXM	PMMA, PI, poly(ethylene- <i>alt</i> -propylene)	bilayer polymer contact angles
2000SS&a	P	A	STXM	PMMA, PEP	rubber modified PMMA
2000SS&b	P	A	STXM	PMMA, Polyisoprene , Poly(ethylene- <i>alt</i> -propylene)	Mechanical blends
2000ST&	E	A	STXM	soils	
2000TS&	M	I	STXM		zone plate fabrication
2000WA&a	P	A	STXM	PS, PMMA	
2000WA&b	B	I	STXM		renewed X1A beamline
2000WG&	P	A	STXM	PS, PMMA	Phase segregation
2000WJ&	B	I	STXM		cryo-tomography
2000WS&	B	A	TXM	green algae tomography	

code	materials	type	tech	species	Comments
2000WT&	M	I	STXM		BESSY STXM
2000WZ&	P	A	STXM	PS, PMMA	Phase segregation
2000ZN	M	A	SPEM	benzoic acid / Ni(11)	linear dichroism , orientation
2000ZS&	M	A	STXM	a-C, graphite, diamond	
2001 SO&	I	I	TR-PEEM	In, Cu	Time-resolved PEEM
2001AU	P	R	STXM		
2001BC&	M	A	SPEM	Ni/GaN	
2001BC&a	M	A	SPEM	Au/GaN	
2001BC&b	M	A	SPEM	Au/GaN	
2001BGK	M	A	SPEM	metal/GaN(0001) interfaces – Shottky barriers	
2001CL&	M	A	PEEM	liquid crystal alignment	
2001DA&	B	R	TXM	Biological and materials applications	
2001DC&	B	A	PEEM	Gd in glioblastoma cells	Gd NCT
2001DG&	B,E	R	PEEM		
2001FB&	B,E	R	STXM		review of NSLS program
2001FJ&	M	I	STXM		segmented detector
2001GB&	M	A	SPEM	(Ni,Ag)/Si(111)	
2001GM&a	B	R	PEEM		
2001GM&b	E	A,I	PEEM	biomineralization	Charge compensation
2001GM&c	M	I	SPEM	multi-channel detection	
2001GM&d	M	A	SPEM	laterally inhomogeneous surface reactions	
2001H	P, B	R	STXM, PEEM	PUR (MDI)-polyurea precipitates; 355 (PU-matrix, SAN, pipa); PS-PI-PS trilayer; polyurea capsules; HSA on PUR-filler; Alb on PTMO-ED-MDI (polytetramethylene oxide±ethylenediamine±MDI)	
2001HK&	P	A	STXM	Polyurethanes, urea precipitates	
2001HS	P,B	R	STXM, PEEM	many	
2001HT&	I	T	PEEM	hard X-rays, Fe K-edge	
2001KH&	P	A	STXM	DVB55, EGDMA	core-shell microspheres
2001LD&a	M	A	SPEM	laser annealed Ti/Si(111)	

code	materials	type	tech	species	Comments
2001LD&b	M	A	SPEM	laser annealed Ti/Si(111)	
2001LD&c	M	A	SPEM	laser annealed Ti/Si(111)	
2001LSa	M	I	SPEM		PSL beamline and undulator
2001LSb	M	I	SPEM	electrical circuits	instrument description
2001MH&	B	A	TXM	Protein in cells	
2001MI&	P	A	PEEM, STXM	PS, PMMA	Compare to AFM; phase segregation
2001OJ&	B	I	STXM	sperm	cryo STXM instrumentation
2001OR&	M	A	PEEM	interfacial mag. spin imaging	
2001OS&	M	A	PEEM	AFM, FM coupling - pinning	
2001RO&	M	A	PEEM	metal-oxide interfaces (pinning)	
2001SA&a	P	A	STXM	Polycarbonate; poly(ABS)	
2001SA&b	P	A	STXM	tires	Mechanical blends
2001SA&c	P	A	STXM	PMMA/ poly(ethylene- <i>alt</i> -propylene)	Cryo-mechanical blends
2001SB	M	A	PEEM	Pb on Si(111) with Au interfactant	
2001SK&	E	A	STXM	humic acid, fulvic acid	
2001SL	M	I	SPEM		PSL SPEM
2001SN&	M	A	PEEM	AFM, FM coupling - pinning	
2001SU&	P	A, R	STXM	PC, P(BrS), PS, PMMA, PE, PVC-PET (food packaging film), PP	
2001VC&	B	I	STXM		dark field microscopy
2001WK&	M	I	TXM		DIC mode
2001ZG&	P	A	STXM	PB/ BIMS / filler (= C-black or SiO ₂)	nanofiller effect on interfaces
2002AK&	P	A	STXM	polylefins	
2002AS	P	R		many	
2002BC&a	B	A	STXM	Fossil plant cells	
2002BC&b	M	I	STXM		Combined for STXM & topography (AFM?)
2002BF&	B	R	STXM		review of NSLS program
2002BG&a	M	A	SPEM	electrochemically patterned Ga on GaN	
2002BG&b	M	A	SPEM	metal/GaN – Schottky barriers	
2002BK	M	R	SPEM	zone plate microscopies	
2002BS&	M	A	SPEM	O/Ru(0001)	
2002CB&	E	A	STXM	high-pH clays	
2002CUA	P	A	STXM	PMMA, many others	radiation damage
2002FGD	B,E	T	PEEM	Transmission in PEEM	

code	materials	type	tech	species	Comments
2002GK&	M	R	SPEM, u-ESCA	review	
2002GL&	M	A	SPEM	XPS of single carbon nanotubes	
2002GM&	M	A	SPEM	K transport on catalysts	
2002GM&b	M	A	SPEM	patterns in H&O on Rh(110)/Pt	
2002HM&	P, B	A	STXM	polyurethane, SAN, pipa, Fg	protein on polymers, dry vs. wet
2002JB&	B,E	R	STXM		review of NSLS program
2002KD&	P	A	STXM	PS	craze alignment, dichroism
2002KH&	P	A	STXM	PAA, PE	Filtration membranes
2002KO&	B	A	STXM		amino acid spectroscopy
2002KP&	M	I	STXM		Differential phase contrast aperture
2002LG&	M	A	microprobe	LiF direct patterning	
2002LJ&	M	A	SPEM	reduction fronts in zirconia	
2002MG&a	M	A	SPEM	patterned alkali on metals	
2002MG&b	M	A	SPEM	transport of alkali on metals	
2002MW&	P	A	STXM	PAA	Cross-link mapping
2002ND&	M	A	SPEM	laser modified Pt/Si(001)	
2002PH&	M	A	SPEM	PbS oxidation	
2002PM&a	M	I	SPEM	multi-channel detection in SPEM (e)	
2002PM&b	M	A	SPEM	Au/Ni(poly)	
2002PR	E	A	STXM	Eu(III) – humics agglomeration	
2002RMM	M	A	STXM	Organics on atmospheric particles	
2002RN&	M	A	PEEM	singl ~10 nm Fe ₂ O ₃ nanoxlls	sub spatial resolution spectroscopy
2002RU&	P	A	STXM	Polyurethanes, SAN, pipa	
2002SO&	M, I	A, T	PEEM	XMCD at PEEM2	
2002SW&	M	A	SPEM	Cs in carbon nanotubes	
2002SW&b	M	A	SPEM	XPS of carbon nanotubes	
2002UA	E	A	STXM	carbonyl compounds	
2002WK&	M	I	TXM		DIC mode
2002YS	B	A	TXM	macrophages	
2002ZF&	P	A	STXM	PMMA, Silsequioxane	
2003AK&	P	I	STXM	STXM532 instrumentation	
2003BC&a	B	A	STXM	Fossil plant cells	
2003BC&b	M	A	SPEM	Si nanowires catalysed by C nanoparticles	

code	materials	type	tech	species	Comments
2003BF&	M	A	SPEM	Fe/Au(001) magnetic films	role of Au segregation
2003BG&	M	R	STXM, PEEM	review	
2003BJ	P	A	STXM	PMMA	radiation damage
2003CB&	P	A	STXM		Crystal structure from dichroism
2003CM&	P	A	STXM	polyurea capsules	
2003DC&	M	I	STXM		Optics design
2003DF&	E	I	PEEM	zircon	Charge compensation
2003FG&	M	T	PEEM		Depth sensitivity
2003FJ&	M	I	STXM		segmented detector
2003FK&a	E	A	STXM	interplanetary dust	
2003FK&b	E	A	STXM	extraterrestrial organics	
2003GK	P	R	STXM, PEEM	PS/P(BrS) wetting	wetting of polymer surfaces
2003GT&	E	T	STXM		analysis program for Fe-organic interactions
2003HA&	P	A	STXM	3d chemical mapping of toners	First serial section STXM tomo
2003HAA	P	A	PEEM	PS, PMMA	
2003JF&	E	T	STXM		cluster analysis
2003Jxx	M	A	TXM	cement	Hydration kinetics & mechanisms
2003K	M	R	SPEM, u-ESCA	review	
2003KB&	M	I	TXM, STXM	Twin-mic progress report	
2003KM	M	A	TXM	Chemical additives	
2003KMM	M	A	TXM	Steel-in-cement - corrosion	
2003KR	M	A	TXM	Ash filler in cement	Hydration kinetics
2003KT&	P	I	STXM	polyurethane, SAN, pipa	ALS interferometric STXM
2003LN&	M	A	PEEM	AFM, FM coupling - pinning	
2003LS&	B, E	A	STXM	bio-mapping biofilms	
2003MK&	M	A	PEEM	ZDDP tribology	
2003OS&	M	A	PEEM	exchange bias	
2003PM&	M	A	SPEM, XPEEM	Pd/Ni(poly) dynamics	
2003RMD	E	A	STXM	Eu(111)-humic aggregates	
2003SC&a	E	A	STXM	organics in clays	
2003SC&b	M	A	SPEM	SiN/Si(111)	
2003SH&	E	A	STXM	colloid functional groups	
2003ST&	E	A	STXM	soil colloids	
2003TSK	E	A	TXM	Bacteria & soil colloids	tomography

code	materials	type	tech	species	Comments
2003WA&	P	A	STXM		Application to rubber science
2003WS&	P	A	STXM, PEEM	PS, PMMA	
2003WYJ	M	I	STXM		achromatic Fresnel optics
2003ZG	P, M	A	STXM	PS, PMMA, WS ₂ nanotubes	
2004A	P	R		many	
2004AB&a	M	A	XPEEM	electron quantum confinement	nanospectroscopy
2004AB&b	M	A	XPEEM	Pd/W(110)	
2004AG&	M	A	SPEM	Au/Si ₃ N ₄ /Si(111) interfaces	
2004AT&	M	A	SPEM	TM nanocrystals in carbon	XPS mapping
2004BL&	E, B	A	STXM	marine particulates	
2004BS&	E	A	STXM	diesel soot	
2004BY&	E	A	STXM	Mn redox states	
2004BZ&	B	A	STXM	Fossil plant cell walls	
2004CA&a	M	A	PEEM(t)	magnetic vortex dynamics	
2004CA&b	M	A	PEEM-(t)	vortex dynamics	
2004CA&c	M	A	SPEM	UV metallization of TiO ₂	Valence band patterning
2004CD&	E	A	PEEM	Polysaccharide templating of Fe nanofibers	
2004CV&	M	A	PEEM	Ag/Si(111)	
2004DF&	B	T	PEEM	Cell surfaces	Ion sputtering depth profile
2004DL&	M	I	STXM	Cu, CO, CO ₂	in situ gas-solid absorption cell, catalysis
2004DM&	M	A	SPEM	promoter induced phase segregation	
2004FG&	B	I	PEEM		Sphinx performance
2004FK&a	E	A	STXM	interplanetary dust	
2004FK&b	E	A	STXM	extraterrestrial organics	
2004FM&	I	T	PEEM	aberration corrector design	
2004FW&	M	A	SPEM	Au/Si(111)-H interface	annealing effects
2004GB&	M	I	u-ESCA	48-channel XPS detector	
2004GE&	M	A	SPEM	MoO ₃ on Al ₂ O ₃	gas transport
2004GS&	E	A	STXM	radionuclide migration	
2004HRH	M	T	TXM		Micro zone plate fabrication
2004IW&	M	A	SPEM	O at Al/organic interfaces	
2004KM&	E	A	STXM	interplanetary dust	
2004LH&	B,E	A	STXM	biofilms	

code	materials	type	tech	species	Comments
2004LHK	M	A	XPEEM	Au/Rh(110)	kinetics of lateral spread
2004LJ&	E	T	STXM		cluster analysis
2004LL	B	A	TXM	Yeast cells (S. Pombe)	tomography
2004M	B,M	A	X-PEEM	HSA/PS-PMMA	biomaterials
2004MG&	M	A	SPEM	O ₂ +H ₂ reaction on Rh(110)	
2004MH&	P	A	PEEM	PS, PMMA, Fg	protein adsorption on polymer blend
2004MR&	E	A	STXM	aerosols	Impact on climate forcing
2004NB&	M	A	PEEM	Antiwear films	
2004NK&	M	A	PEEM	Antiwear films	
2004NN&	M	A	PEEM	Antiwear films	
2004OK&	I,M	T	PEEM(t)	time-of-flight energy analysis	
2004PR&	E	A	STXM	humic acid analysis	
2004PRD	E	A	STXM	groundwater colloids	
2004RH&	M	T	TXM		Condenser zone plate fabrication
2004RPD	E	A	STXM	organics speciation in soils	
2004SL&	M	A	PEEM	AFM exchange spring	
2004SN	M	A	PEEM	exchange bias – domain size effect	
2004ST&	M	A	SPEM	La1=4Pr3=8Ca3=8MnO3 Manganite	Detect insulating domains in metallic mtz
2004SW&	M	A	SPEM	valence band of SW carbon nanotubes	
2004TW&	B,E,M	I	STXM		ALS STXM11.0.2 instrument description
2004W	P	A	STXM	BR/BIMS rubbers	
2004WD&	M	I	STXM		Twinmic Ta zone plates
2004WK&	M	I	STXM		Twinmic Ta zone plates
2004YJ&	E	A	STXM	Al micro-organisms	
2005AH&	P	A	STXM	Ca alginate; poly N-vinylpyrrolidone	
2005BC&	M	A	SPEM	nanoparticles to nanotubes	catalytic free transformation
2005BH&	E	A	STXM	diesel soot	TEM-EELS comparison
2005BN&	M	A	SPEM	subsurface O in O/Ru(0001)	
2005BR&	E	A	STXM	Eu(III) adsorb. on smectite	
2005BS&	E	A	STXM	diesel soot	
2005BT&	E	A	STXM	Eu on smectite	
2005CH&	M	I	STXM		CXRO zone plate fabrication – 15 nm resolution
2005CS&	P	A	STXM	DVB55, malonic acid, EGDMA	tectocapsules

code	materials	type	tech	species	Comments
2005CS&b	E	A	STXM	Cm(III) sorption	
2005DB&	M	A	SPEM	oxid/ reduct of Rh(110)	
2005DC&	M	I	STXM		Optics design
2005DRC	B	A	PEEM	Gd CNT	
2005DSG	E	A	PEEM	biomineralization	
2005FA&	P	A	STXM	P4VP/SiO ₂ microgel particles pH swellable	stimulus response microgels
2005FF&	I	T	PEEM	aberration corrector design	
2005GFA	E	A	PEEM	biomineralization	
2005GML	B	A	TXM	Yeast cells (S. Pombe)	tomography
2005GS&	P	I	STXM	polyaniline	in situ electrochemistry
2005HM&	M,E	R	STXM	Polyurethanes, biofilms	review
2005Jxx	M	A	TXM	CaCl ₂ in cement	
2005KS	E	A	STXM	metal transport	
2005LB&	M	R	SPEM, XPEEM	review	
2005LJ&	E	T	STXM		Cluster analysis method
2005LL&	E	A	STXM	black carbon, soil	
2005LS&	M	A	XPEEM	H ₂ +O ₂ on au/Ru(110)	
2005MB&	M	A	SPEM	dark spots on OLEDs	
2005ML&	B	A	STXM	lignin mapping	
2005MP&	P	A	STXM	Polymer resists	
2005NB&	M	A	PEEM	Antiwear films	
2005NN&	M	A	PEEM	Antiwear films	
2005NT&	M	A	STXM	Actinide particles	
2005OK&	M	T	PEEM(t)	XMCD dynamics	
2005PL&	M	A	PEEM	Antiwear films	
2005PM&	M	A	SPEM	Pd/Ni as f(T)	
2005PR&	E	A	STXM	model studies for humics in soil	
2005SB&	E	A	STXM	fulvic acids in aquifers	
2005SC&	B,M	A	SPEM	cysteine on Pt(111)	
2005SC&a	E	A	STXM	humics in soil	
2005SC&b	E	A	STXM	organic soil colloids	
2005SL&	E	A	STXM	organics speciation in soils	
2005SM	M	A	TXM	Cement deterioration	

code	materials	type	tech	species	Comments
2005SR&	M	A	TXM	Electromigration visualization	
2005SS&	E,B	R	PEEM	nacre; Fe-OOH template; zircons; designer peptides for guiding mineralization	
2005TF&					
2005TO&	P	A	STXM	PS, PMMA	
2005WAA	P	A, T	RSoXS	PS-PMMA	resonant scattering
2005WAA	M	R	RSoXS	Organic thin films	
2006AA&	P	A	REXS		
2006AA&	M	A	RSoXS	PS & PMMA particles	
2006AC&	M	B	TXM	15 nm bio imaging	
2006AH&	B	A	STXM	melanomas in mouse iris	
2006AS&	M	A	PEEM(t)	quantum magnetism dynamics	
2006BA&	B, E	R,I	STXM	environmental apps.	ALS BL 11.0.2 MES science overview
2006BM&	M	A	STXM	Calcification deposits	Bacterial origin of human calcification
2006BT&	E	A	STXM	Wild 2 comet analysis	
2006BW&	E	A	STXM	diesel soot	
2006CH&	M	A	PEEM	polyimide alignment	
2006CR&	P, B	A	STXM	silk	Dichroism mapping
2006CZ&	M	A	SPEM	organic LED degradation	
2006D	E	A	STXM	actinide speciation	
2006DA&	M	A	SPEM	Oxidation of Rh(001)	
2006DL&	B, E	A	STXM	chlorhexidine in biofilms	antimicrobials
2006DR&	B	A	PEEM	Gd neutron capture therapy	
2006DT&	B, E	A	STXM	Fe, Ni, Mn in biofilms	
2006DZ&	E	A	STXM	zeolites	H ⁺ , Cu ⁺ exchange
2006EO&	M	T	STM-SR	Ni-dots	STM tip current modulation by SR, 20 nm
2006FH&a	M	A	STXM	carbon nanotubes	
2006FH&b	B	I	STXM		dark/phase detector (segmented Si photodiode)
2006FK&	E	A	STXM	extraterrestrial organics	
2006GH&	M	A	SPEM	K 7 K/O on Rh(111)	
2006GM&	M	T	STXM	CCD-based segmented detector	
2006GM&	M	I	STXM		Twinmic STXM & configurable detector

code	materials	type	tech	species	Comments
2006GR&	M	A	TXM	Electromigration visualization	
2006HB&a	E	A	STXM	black carbon, sediments	
2006HB&b	E	A	STXM	black carbon in sediments	
2006HH&a	P, B	A	STXM	silk worm cocoon silk	orientation mapping
2006HH&b	I, P, B	A	STXM	spider dragline silk	in situ azimuthal rotation; orientation mapping
2006HLH	M	T	TXM		Optimizing zone plate fabrication
2006IT&a	P	A	STXM	toners	
2006IT&b	P	A	STXM	toners	
2006JD&a	B	A	STXM	Tomography - biofilm	First 3d chemical mapping by tomo
2006JD&b	P	A	STXM	Tomography – PS, acrylate spheres	
2006KF&	M	A	TXM	CoCrPt multilayer	15 nm XMCD imaging of domains
2006KS&	E	A	STXM	soils	
2006KS&	M	I	TXM/STXM		Elettra Twinmic description
2006L	B, M	A	X-PEEM	HSA/ & Fg / PS-PMMA	biomaterials
2006LA&	M	A, R	XPEEM	review	
2006LH&	P	A	PEEM	PS, PMMA, alb	protein adsorption on polymer blend
2006LH&b	I,M	A	PEEM		CLS PEEM described
2006LK	M	R	SPEM	review	
2006LL&	E	A	STXM	black carbon in sediments	
2006LM&	M	A	XPEEM	periodic surface reactions	
2006MG&	M	I	STXM		CCD system for bright/dark/phase
2006ML&	P	A, T	RSoXS	low K dielectric	resonant scattering
2006ML&	M	A	RSoXS	SiLK structure	
2006MW&a	P	A	STXM	poly(9,9-dioctylfluorene-co-N-(4-butylphenyl)diphenylamine) (TFB) and poly(9,9'-dioctylfluorene-co-benzothiadiazole) (F8BT)	solar cell blend
2006MW&b	P	A	STXM	fullerene-PHT, PCBM composites	reinforcement
2006NP&	E	A	STXM	Eu(II) in humics	
2006OL&	P	A	STXM	Hydrogen Silsesquioxane Resist	Damage mechanisms
2006OS&	M	A	PEEM	exchange bias	
2006PL&	M	A	XPEEM	Tribofilms on steel	Role of cation
2006SA&a	P	A	STXM	PS/PMMA, PC/SN and PMMA/EVA	Clay compatibilizers

code	materials	type	tech	species	Comments
				blends with Cloisite 20A or Cloisite 6A	
2006SA&b	E	A	STXM	Wild 2 comet analysis	
2006SC&	E	A	STXM	dissolved organic matter	
2006SW	M	R	all	Magnetism – spectroscopy & microscopy	
2006TVH	B	T	TXM	Diatom, COS-cells	Liquid jet TXM design & performance
2006VL&a	B	T	TXM	Diatom, COS-cells	Liquid jet TXM design & performance
2006VL&b	M	I	TXM		Twinmic condenser (coherence breaking)
2006WP&	M	A	STXM	vortex dynamics	80 ps time resolution
2006WR&	P	A	PEEM	PE	T-m depends on substrate
2006YB&	E	A	STXM	Coke, carbon black, soot	
2006ZA&	M	A	STXM	polyethylene	Solid state effects on C 1s spectrum
2006ZZ&	E	A	STXM	Wild 2 comet analysis	
2007AB&a	M	A, R	SPEM, XPEEM	review	
2007AB&b	M	A	XPEEM	Mg/W(110)	
2007AC&	M	A	STXM	Permalloy magnetic dynamics	Software for acquisition
2007BT&	M	T	TXM		Zone plate testing rig
2007CK	E	A	STXM	humic acids	
2007CP&	M	A	STXM	permalloy	Vortex core dynamics
2007DK&	M	A	TXM	Polyelectrolyte capsules	
2007EG&	M,B	R	SPEM, TXM, STXM, IR	Bone, catalysts	Overview of Elettra capabilities as TwinMIC turns on
2007FA&	P	A	STXM	P4VP-SiO2 microgel	
2007FB&	M	A	STXM	nanotubes	
2007FK&	M	A	TXM	permalloy	Magnetic dynamics
2007FU	M	A	STXM	n-alkane films	growth (n, T dependence)
2007GG&	M	A	SPEM	organic LED degradation	
2007GS&	B	A	TXM	Yeast cells (S. Pombe)	tomography
2007GS&	M	A	XPEEM	Tibology properties on nano-diamond	
2007GT&	B,P	A	TXM	dragline spider silk	
2007HFJ	M	T	STXM		Quantitative amplitude & phase imaging
2007HH&	I, P, B	A	STXM	spider dragline silk	orientation mapping
2007HJ&	P, I	A	STXM	Polyacrylate-polystyrene spheres in 3d	Tomography at C 1s edge
2007HJW	B,E,P	R		many	

code	materials	type	tech	species	Comments
2007HL&a	P	A	STXM	polyurea – aromatic, aliphatic	capsules
2007HL&b	E	A	STXM	Aerosol balls	correlate optical, chemical, physical props
2007HT&	E	A	STXM	black carbon & aerosols	
2007HYV	M	T	TXM	Modeling image formation	Phase contrast microscope
2007JT&	P, I	A	STXM	Polyacrylate-polystyrene spheres in 3d	tomography
2007KB&	M	A	STXM	permalloy	Mag. Vortex dynamics
2007KD&a	M, P	A	STXM	Liquid crystal	orientation mapping
2007KD&b	M	A	TXM	Polyelectrolyte assemblies (colloids)	
2007KH	P	A	STXM	smectic liquid crystal	orientation mapping
2007KK&	M	I	STXM, PEEM	CLS 10ID beamline & microscopes	
2007LHH	M	T	TXM		High resolution ZP manufacture
2007LT&	M	T	TXM		High resolution ZP manufacture
2007MA&	B, M	A	PEEM	nacre (aragonite)	polarization mapping
2007MB&a	M	A	SPEM	LiF damage & patterning	
2007MB&b	M	A	TXM	permalloy	Magnetic dynamics
2007MT&	E	A	STXM	Soot by laser – aerosol models	
2007MW&	M	A	STXM	Photovoltaic cells	
2007PL&a	M	A	XPEEM	Tribofilms on steel	
2007PL&b	M	A	XPEEM	Tribofilms on AlSi	
2007PL&b	M	A	XPEEM	ZDDP tribofilms on AlSi	
2007RH&	P, B	A	STXM	silk	orientation mapping
2007SC&	E	A	STXM	colloid particulates in lake water	
2007SG&a	M	A	XPEEM	Tibology properties on nano-diamond	
2007SG&b	M	T	TXM	diatom	Algorithm for auto-locating Au cols
2007SPH	M	T	STXM	wet cell design	
2007TG&	E	A	STXM	aerosol tar balls	
2007TG&	P	A	STXM	phase change microcapsules	first SLS science paper ?
2007TOH	M	T	TXM		Phase contrast microscope
2007TS&	B	T	TXM	Diatom, COS-cells	Liquid jet TXM design & performance
2007ULF	P, M	R	STXM, PEEM	orientation mapping	
2007WA&	M	R	RSoXS	Organic thin films	
2007WB&	M	A	STXM	Stardust tracks	
2007WS&	P	A	STXM	PMMA, PAN	chemically sensitive patterning
2007WSH	P	A	STXM	PMMA, PAN, PEC, PPC	Tricolor chemically sensitive patterning

code	materials	type	tech	species	Comments
2007WT	M	A	STXM	rubbers	filler migration
2007WTT	E	A	STXM	soil	Organic carbon forms
2008AA&	M	A	STXM	Compare to TEM-EELS	
2008AG&	B	T	STXM	TiO ₂ nanoparticles	Contrast agent tests
2008AH	P	R	STXM		Review of polymer X-ray microscopy
2008AL&	B	I	STXM	hepatocyte from human liver	Low energy X-ray fluorescence in STXM
2008BB&	M	A	STXM	PFB-F8BT organic solar cell films	Role of solvent
2008BC&	M,E	A	STXM	Natural graphites	Orientation and chemical variation
2008BG&	E	A	STXM	Carbonaceous material	FIB damage
2008BH&a	M, B	A	PEEM	HSA, sub-6 peptide competitive adsorption on PS/PMMA	
2008BH&b	M	T	TXM		Differential interference contrast microscope
2008BH&c	E, B	A	STXM	Aerosol particles	Distinguishing woodsmoke & diesel exhaust
2008BM&a	E	A	STXM	Nanoscale arsenic	
2008BM&b	M	A	STXM	permalloy	Mag. Vortex dynamics
2008BU&	M	T	STXM	Silver corrosion	Technique demonstration
2008CL&	M	A	PEEM	Langmuir-Blodgett films	Phase segregation, SEEM contrast
2008DF&	E	A	STXM	Elemental carbon	
2008DL&	E	A	STXM	Chlorhexidine – antimicrobial maps	
2008EGG	B	A	TXM	contact elements of insect attachment	
2008FK&	M	A	TXM	Permalloy	Vortex dynamics
2008FT&	M	A	STXM	Gas filled PVA microballoons	
2008GFK	M	A	PEEM	Polyaniline/steel	Corrosion protection
2008GK&	M	A	XPEEM	Diamond film	Low friction mechanism
2008GM&	B, M	A	STXM	Au nanoparticles in skin	
2008GS&	E	A	STXM	Stardust	
2008HB&	M	T	TXM	Test structure	Simple Zernicke phase contrast
2008HBV	M	T	TXM		Differential interference contrast optic
2008HD&	P, M	A	STXM	Acrylate/PS microsphere tomo; PET radiation damage	comparison of STXM-NEXAFS and TEM-EELS
2008HD&b	E	A	STXM	Cloud droplets	
2008HH	P	R	STXM, PEEM	comprehensive polymer review	Contains this biblio as supplement
2008HH&	E	A	STXM	<i>Pseudomonas Aeruginosa</i> & iron	
2008HJ&	M	A,T	STXM	Latex PS, p-MMA microspheres	tomography

code	materials	type	tech	species	Comments
2008HT&	M	A	PEEM	Fluorocarbon / Ti stent	Reliability analysis
2008JV&	M	I	TXM		Condenser design
2008KW&	M	A	STXM	Water particulate matter	Quantification (size, chemistry)
2008LB&	M, B	A	XPEEM	Alb on PS/PMMA	pH effect
2008LG&	P	A	STXM	RuO ₂ in Nafion fuel cell membrane	
2008LH&	P,B	A	PEEM	Peptide (sub-6) vs. protein (albumin) competitive adsorption on PS/PMMA	Natural NEXAFS contrast
2008LM&	E	A	STXM	Asian atmospheric aerosols	
2008LR&	M	A,I	X-SNOM	ZnO	ESRF implementation of tip detection of XAS
2008LS&	E	A	STXM	soil organics	
2008MD&	E	A	STXM	Atmospheric aerosols - metals	
2008MK&	E	A	STXM	Aragonite in abalone nacre	Polarization; growth mechanism
2008MM&	E	A	STXM	Ferrihydrite & polysaccharides	Alginate, xanthan spectra; multi-technique
2008MT&	M	A	TXM	Soil colloids	
2008MT&b	E	A	STXM	Framboidal pyrite in biofilm	
2008MW&	M	A	STXM	polyfluorene blends	Photovoltaic optimization
2008MZ&	E	A	STXM	Aragonite in abalone nacre	Polarization; growth mechanism
2008NH&	M	A	STXM	Multi-wall carbon nanotubes	Dichroism; quality evaluation (AD, vs, CVD)
2008NM&	B	A	STXM	Lipid membranes (solid supported)	
2008PM&	B	A	TXM	Tomography with NCXT	
2008RB&	M	I,A	DIXH	PS and Fe ₃ O ₄ spheres	First chemical (elemental) contrast
2008RT&	M	I	STXM	Pt-Ir-Co film - XMCD, TCNQ - XLD	PoLux BL & STXM description
2008SRW	M	I	TXM		Zone plate fabrication
2008SS&	M	A	STXM	Fe-oxide catalyst	In situ, H ₂ , 1 atm, T to 450 C
2008TG&a	M	A	STXM	Phase change microcapsules	
2008TG&b	E	R	TXM		
2008TG&c	M	A	STXM	N ₂ filled PVA balloons in water	
2008TGR	E	A	STXM	Atmospheric aerosols	
2008ULF	M	R	STXM, PEEM	Dichroic measurements	
2008VB&	M	A	STXM	permalloy	Mag. Vortex dynamics
2008VB&	M	I	STXM/TXM		high heat load Si zone plates
2008W	M	A	STXM	PMMA, PAN, PS, Fg, PEC	Lithography, chemically selective patterns
2008WA	M	A	STXM	graphite	polarization calibration
2008ZG&	M	A	TXM	Semiconductor circuits	

code	materials	type	tech	species	Comments
2008ZM&	M	A	STXM	Biogenic aragonite	C 1s spectroscopy & pol. Dep.
2008ZYS	M	A	TXM	Semiconductor circuits	non-destructive imaging
2009AK&	M, B	I	STXM	NIST 2783 particulates, hepatocytes	Low energy X-ray fluorescence in STXM
2009AS	M, P	R	STXM	Magnetic & polymer applications	review
2009AS&	M	A	STXM	Metal-carboxylates	C 1s spectroscopy & calc
2009AW&	M	A	STXM	Polymer solar cells	Predicts hard X-rays will win out
2009AW&	P	A	SXoXS	Polymer trilayers	
2009BB&a	M	I	TXM	design	Colorado State; EUV HH-laser
2009BB&b	P	A	STXM	Ternary blend organic solar cells	
2009BB&c	B	A	STXM	sporopollen	Related to coalification & palaeobotany
2009BH&	B	A	TXM	Diatom, soil particles	Stockholm compact lab-TXM
2009BK&	E	A	STXM	Soot particles	Radiation damage in EELS
2009BN&	E	A	STXM	Primitive dust particles in space	
2009BU&b	M	A	STXM	Ag corrosion by chloride	In situ electrochemistry
2009CB&	B	A	STXM	Polysaccharides, lignin, cellulose	Plant cell wall analysis
2009CC&	B	A	TXM	Vaccinia Virus	tomography
2009CF&	E	A	STXM	Fe-oxyhydride mineralization	on polysaccharides
2009CH&	E	A	STXM	Hydrocarbon, clay	Oil sands issues
2009CP	M	A	PEEM	pyrite	Surface oxidation
2009DL&	E	A	STXM	Chlorhexidine – antimicrobial maps	
2009DT&	E	A	STXM	Organics in aerosols	
2009FD&	P	A	STXM	Poly(2-vinylpyridine) microgels	pH, electrolyte; wet cell
2009GA&	E	A	STXM	Carbonaceous nanoglobules	meteorites
2009GK&a	M	I	STXM		Low energy X-ray fluorescence in STXM
2009GK&b	M, B	I	STXM	Star pattern, hepatocytes	Low energy X-ray fluorescence in STXM
2009GM&	E	A	XPEEM	Aragonite in abalone nacre	Ordering kinetics
2009GS&	E	I	TXM	soils	Stereoscopic methods
2009GS&b	E	A	STXM	Organic matter in comets	
2009GT&	E	A	TXM	Haematite; clay suspensions	Stereo imaging
2009HB&a	M	I	TXM	design	Stockholm compact lab-TXM
2009HB&b	M	I	TXM	phase contrast ZP optics	Stockholm compact lab-TXM – phase contrast
2009HB&c	B,M	R	STXM, CDI	Expect to limit at 10 nm	Radiation damage limitations
2009HD&	B,E	A	STXM	Ni, Mn, Fe in Ni-loaded biofilm	co-localized metals

code	materials	type	tech	species	Comments
2009HG&	M, B	I	TXM	TiO ₂ particles; cell;	First real spectroscopy in TXM
2009HS&	M	T	STXM	Dealing with absorption saturation	Ca compounds
2009HSH	M	I	TXM	design	Energetiq Technology, Inc.
2009KG&	B	A	STXM	Aleurone cells, bio applications	Low energy X-ray fluorescence in STXM
2009KI&	M	I	STXM	Mirror characterization	
2009KM&	B,E	A	XPEEM	Calcite sea urchin tooth	orientation
2009LB&	B	A	STXM	Organics in 2.9 Gy stromalites	Biogeo, compare to STEM-EELS
2009LH&a	P	A	STXM	Polyurea capsules	Gradient mapping, mechanisms
2009LH&b	P	A	XPEEM	PS-PLA blends	Comp to AFM
2009LM&	E	A	STXM	aerosols	
2009LM&	B	I	TXM	Yeast cells (S. Pombe)	Light microscopy & tomo complement
2009LP&	B	A	STXM	Spider silk – beta sheet orientation – effect of water	
2009LP&	B, P	A	STXM	N. clavipes silk	effect of humidity on alignment
2009LT&	E	A	STXM	aerosols	
2009LW&	B,M	A	XPEEM	HSA adsorbed to PS-PLA	
2009LW&a	B	A	XPEEM	Albumin on PS-PLA	
2009LW&b	B	A	STXM	Albumin on PS-PMMA	
2009LW&c	B,M	A	XPEEM	HSA adsorbed to Poly-lactide, PS blend	
2009MA&	B	A	X-PEEM	Sea urchin teeth	Dichroic mapping
2009MB&a	B,E	A	STXM	Iron biomineralization	Anoxic studies
2009MB&b	B,E	A	STXM	Vivianite reduction by bacteria	
2009MGK	M	I	STXM	PS microspheres (test object)	Image reconstruction (toward ptychography)
2009MH&	E	A	STXM	Aerosols in Mexico city	
2009MJ&	M	A	STXM	PP /Montmorillonite Nanocomposites	
2009MK&	M	A	STXM	(CpSiMe ₃) ₃ M-ECp* (M = Nd, U; E = Al, Ga; Cp* = C ₅ Me ₅)	Actinide structure by STXM spectroscopy
2009ML&a	B	I	TXM	Yeast cells (S. Pombe)	tomography
2009MP&	B	A	STXM	wood	
2009MT&	E	A	STXM	Pyrite in biofilm	
2009NA&	E	A	STXM	Stardust	
2009NH&	M	A	STXM	Defects in MW-CNTs	
2009NS&	E	A	STXM	S-metabolizing - syntrophic	
2009OD&	E	A	STXM	Biomineralization – calcite & bacteria	

code	materials	type	tech	species	Comments
2009OKU	M	A	STXM	ferrocene and related compounds	
2009OWHa	E	A	STXM	Calcite biomineralization in cyanobacteria	Grid tomography
2009OWHb	E	A	STXM	Calcite biomineralization in cyanobacteria	Grid tomography
2009PR&	E	A	STXM	Eu-humic acid complexes	
2009RR&	M	I	TXM		Higher order ZP focusing
2009RS&	B	I	DIXH	diatom	Fs coherent imaging at 140 eV
2009SA&	E	A	STXM	Stardust	
2009SB&	M	I	TXM	design	Accel: Electric discharge source
2009SC	M	I	TXM	Test patterns	Hefei NSRL instrument
2009SS&	M	A	STXM	Fischer Torpsch catalyst (Fe)	in situ operation (, H ₂ , 1 atm, T to 450 C)
2009SW&	P	A	RSoXS	polymers	
2009SW&	M	R	RSoXS	Polymer tri-layers	
2009TF&	M	A	STXM	Gas filled PVA microballoons	
2009TF&b	E	A	STXM	Fe(II) in carbonmatrices	
2009TI&	B	A	TXM	Plankton in Lake Biwa (eutrophic)	COD, BOD
2009TS&	E	A	TXM	soils	Stockholm compact lab-TXM
2009UM&	B	A	TXM	<i>Candida albicans</i>	Fungae tomography
2009WA&	M	A	RSoXS	Solar cell interfaces	
2009WB&a	P	A	STXM	Rad. Dmg in PET	Comp. to TEM-EELS
2009WB&b	M	A	STXM	P3HT:PCBM blend films	Solar cells
2009WG&	P	A	STXM	Conjugated Polymer Bilayers	Interfacial widths
2009WM&	P	A,T	PEEM, STXM	PS, PMMA, Fg	radiation damage
2009WR&	M	I	TXM		Stacked zone plates
2009WV&	M	A	STXM	permalloy	Vortex core dynamics
2009YT&a	B	A	TXM	chromosomes	
2009YT&b	B	A	TXM	Immuno-labelled cells	
2009ZH&a	M	A	TXM	Electronic interconnects	
2009ZH&b	M	A	TXM	Copper interconnects	
2010AE&	M	A	STXM	FeGd ML on nanospheres	
2010AH&	M	A	XPEEM	Pentlandite, Pyrrhotite, Chalcopyrite	compared to TOF-SIMS
2010AL&	M	A	STXM	Nanosphere magnets	out-of-plane magnetized
2010BA&	E, B	A	XPEEM	Calcium-organic composites	Paleobotany, coal formation

code	materials	type	tech	species	Comments
2010BB&	E	A	STXM	Fossils in pyrite	Organic residues
2010BC&	M	A	STXM	La ₂ U ₂ Se ₉	
2010BG&	M	A	STXM	Metal corrosion of nafion in fuel cell	In situ electrochemistry
2010BM&	E	A	STXM	phototrophic iron-oxidizing bacterium	Fe biomineralization
2010BRP	E	A	STXM	Soot particles	
2010BV&	M	A	STXM	pentacene	In a FET
2010BV&a	M	A	STXM	Pentacene FET	Grain orientation
2010BV&b	M	A	STXM	Pentacene FET	Grain orientation
2010BW&	P, B	A	STXM, PEEM	PEO, albumin adsorption	
2010BY&	M	A	STXM	NaReO ₄ – O 1s spectrum	FY, TEY, I-t (STXM) comparison
2010CF&	E	A	STXM	Iron oxidizing bacteria M. ferrooxydans	Polysaccharides in stalks
2010CG	E	A	XPEEM	pyrite	Oxidation & weathering
2010CG&	P	A	STXM	Polymer-fullerene (organic solar cell)	Miscibility
2010CH&	P	A	PEEM	Fluorocarbon coatings on implants	
2010CK&	P	A	STXM	HSQ	Radiation damage spreading
2010DA&	M	A	SPEM	Pt on Gas Diffusion Layer	PEM-FC
2010DL&	M	I	SPEM		Elettra SPEM (3.2L) beamline
2010F	M	R	TXM	(Co _x Cy _v) _z , permalloy	Spin dynamics
2010FG&	M	A	STXM	Defects mapping in carbon nanotubes	
2010G	M	R	TXM, STXM		Nanoscience applications review
2010GN&	E	A	STXM	Organic nanoglobules	
2010GS&	M	R, A	STXM	Fe catalysts	In situ; review comparing to TEM-EELS
2010GT	E	A	STXM	Aerosol particles	Hygroscopic effects
2010HB&	P, M	A	STXM	pentacene based P-FET	In situ operating device
2010HC&	M	I	STXM		Electron yield detection
2010HO&	E	A	STXM	Acidovorax cells As / Fe	As binding mechanisms
2010HR	E	A	STXM	Classification of aerosol organics	
2010HT&	E,B	A	STXM	Acidovorax cells As / Fe	X-ray fluorescence yield stacks
2010HWO	E	A	STXM	CaCO ₃ S. leopolensis Biomineralization	STXM spectro-tomography
2010JR&	M	A	XPEEM	GaAs nanowires	
2010KA&	M	I	STXM		Stxm5321 design
2010KB&	M	A	STXM	Pentacene, per-F-pentacene on PEN	Crystal ordering in thin films
2010KM&	M	A	STXM		Magnetic dynamics: pulsed chirality reversal
2010KN&	E	A	STXM	biochar	

code	materials	type	tech	species	Comments
2010KW&	E	A	STXM	Ice formation on anthropogenic NP	
2010La	B	A	STXM	MV-1 MTB, MMP	XMCD of single magnetosomes
2010Lb	B,M	A	XPEEM	HSA PS-PMMA-b-PAA, HSA / PS-PMMA-b-PAA, HSA/PS-PLA; Ubq/PEO-ppAA,	Protein-polymer interactions
2010LBH	R, P	A	XPEEM, STXM	HSA, Fg, peptides adsorbed on : PS/PMMA, PS/PEO, PS/PLA	Protein – polymer adsorption in context of biomaterials
2010Lc	M	A	STXM	Aromatic, aliphatic	Microcapsule synthesis methods
2010LH&a	B,E	A	STXM	MV-1 magnetotactic bacteria	XMCD of individual magnetosomes
2010LH&b	P, B	A	PEEM	PEO, albumin adsorption	
2010LHS	P	A	STXM	Polymer capsules	
2010LS&	M	A	TXM	nanostructured sulfated zirconias	
2010LT&	M, P	A	PEEM	Fluorocarbon coatings on stainless steel	
2010LW&a	P	A	PEEM	Cross-linked PEO	PETA at levels >5% destroys protein repellancy
2010LW&b	B,P	A	XPEEM	HSA adsorbed to PS-PEO(x-link)	
2010Ma	E,M	R	PEEM, SPEM	Ge/Au; SnO ₂ nanowires, Co np, abalone	Rules for efficient spectromicroscopy
2010MA&	P	A	STXM	Ferroelectric polymers	
2010Mb	M	A	STXM	Actinide materials	Technique comparison
2010ME&	B,E	A	XPEEM	Protein template to aragonite in nacre	biomineralization
2010MG&	B	I, T	CXDI, FTH, DIXH	diatom	Fs coherent imaging at 140 eV
2010MH&	M	A	STXM	Aerosol particles	Automated analysis
2010MJ&	P	A	STXM	PP/MMT/SEBS polymer nanocomposite	
2010MK&	M	I	STXM		Ptychography set-up
2010MN&	E	A	STXM	aerosols	
2010MT&a	B,E	A	XPEEM	asp2 peptide in calcite (CaCO ₃)	biomineralization
2010MT&b	E	A	STXM	aerosols	
2010MT&c	E	A	STXM	aerosols	
2010NK&	E	R	STXM		Soil organic-mineral interactions
2010NM&a	B,E	R	STXM	Bacterial biofilms	Compare to LSCM, nmr
2010NM&b	E	A	STXM	Artificial cometary ice	
2010NW&	M	A	STXM	SW-CNT; dodecyl-functionalization	Dichroism of SWCNT like that in MWCNT
2010OR&	M	R	XPEEM	Time & energy- resolved PEEM	108 ps time resolution, xmcd dynamics; use

code	materials	type	tech	species	Comments
					for chromatic aberration correction
2010PG&	E	A	STXM	Graphite in quartz-pyroxene	
2010PR&	E	A	STXM	Eu(III) – humic acid aggregates	Luminescence yield correlated; calculations
2010PT&	E	A	STXM	Playa salts – nucleating clouds	
2010RD&	E	A	STXM	Cloud droplets	
2010RF&	B,E	A	STXM	Amorphous CaCO ₃	
2010RH&	E	A	STXM	Particles in ocean bubble bursts	
2010RL	E	A	STXM	roots	Nutrient flow
2010SD&	M, E	A	STXM	Organics in meteorites	
2010SG&	B	A, I	TXM	mouse adenocarcinoma cells	First tissue tomo by TXM, 70 nm resolution
2010SK&	M	A	TR-PEEM	In Co/Cr/Fe(0 0 1) pads	Vortex motion
2010SM&	M	I	PEEM		Optics – 4 nm in LEEM
2010SP&	M	A	STXM	Memresistive device	Identify functional channels
2010SR&a	M	I	SP-STXM	Scanning probe enhanced STXM	Instrument description
2010SR&b	E	A	STXM	Organic aerosol particles	
2010SR&c	M	I	TXM		High efficiency zone plates
2010SW&a	M	A	STXM	N in fuel cell membranes	
2010SW&b	M	A	RSoXS	Heterojunction photovoltaics	
2010TC	M	R	STXM	Permalloy vortices; spin valves	Magnetization dynamics
2010TG&	E	A	TXM	Nanoparticles in water	
2010TLR	E	A	STXM	Carboxylic acids - aerosols	
2010TP&	M	A	STXM	lyotropic chromonic liquid crystals	Effect of additives
2010TS&	B	R	TXM, STXM	Soil	Review of soil & environmental apps.
2010WC&	M	A	STXM	Montmorillonite exchange Na ⁺ /NH ₄ ⁺	
2010WM	M	A	STXM	PS-PMMA; polyfluorene	TEY, transmission
2010WR&	M	I	TXM	15 nm Zone plate development	
2010WZ&	P	A	STXM	PE orientation	
2010YA&	E	A	STXM	Organics in meteorites	
2010YS&	M	A	RSoXS		Organic PV materials
2010YW&	M, P	A	STXM	Organic photovoltaics	Interface roughness / annealing
2010ZW&a	M	A	STXM	N in carbon nanotubes	
2010ZW&b	M	A	STXM	RuO ₂ /CNT sensors	
2011BA&	M	A	SPEM		
2011BG&	M	A	STXM	Ni corrosion in ionic liquid	XRF and in situ electrochem

code	materials	type	tech	species	Comments
2011BH&a	E	A	STXM	Organics in shale	
2011BH&b	M	A	STXM		Surface-sensitive TEY
2011BM&a	E	A	STXM	coral	Dichroic mapping
2011BM&b	M	A	STXM	Fuel cells	In situ electrochem; XRF
2011BS&a	M	A	STXM	Mapping gas & liquid water in fuel cells	
2011BS&b	M	A	STXM	PFB-F8BT organic solar cell films	Composition & morphology
2011BT&	M	A	STXM	SOFC interconnects	
2011CB&	M	A	STXM	MEH-PPV:Porphyrim:PCBM solar cells	
2011CC&	E,B	A	STXM	Fe biomineralization	
2011CG&	E	A	STXM	Chitin-protein complexes	
2011CH&	M	A	XPEEM		SEEM in energy filtered XPEEM
2011CH&b	E	A	STXM		chondritic and cometary organic solids
2011CS&	M	A	STXM		Fe film ion-beam patterning
2011CTA	M	A	RSoXS		Organic solar cells
2011DG&	M	A	SPEM	high O SiO _x protrusions on SiO ₂	
2011DQ&	B	A	TXM	myelinated axon	TXM tomo coupled to ESRF XRF-STXM
2011DV&	M	A	STXM	Co in cement	
2011GB&	M	A	TXM	TiO ₂ nano ribbons	First TXM spectromicroscopy, dichroism
2011GK&	M	A	STXM	Fe – Au galvanic couple	in situ Electrochem
2011GLT	M	A	STXM	Malonic acid particles	Keto-enol tautomerism
2011GW	B	R	XPEEM		Biomineralization review
2011GYC	M	A	XPEEM	Mollusk calcite	C 1s Linear dichroism
2011HB&	E	A	STXM	Organics in Tagish lake meteorite	
2011HF&	M	A	STXM	GaN nanowires	
2011IW&	B	A	STXM	Latarcin A antimicrobial peptide	
2011KD&	M	T	SPEM	Graphene windows allow liquid PES	
2011KM&	B,M	A	PEEM	Sea urchin teeth	Sharpening mechanism
2011KN&	E	A	STXM	Organics in soil	
2011LD&b	E	A	STXM		Aerosols from burning
2011LH&	B	A	STXM	Anoplin (antimicrobial-peptide)	Lipid interactions
2011LHa	P	A	STXM	PMMA	Source of ‘damage spreading’ is PSF
2011LHb	E	R	STXM	chlorhexidine	Organic contaminants in environment
2011LHc	T	T	STXM	PMMA	point spread function mapping at 3 STXMs
2011LM&a	P	A	STXM	polyurea microcapsules	Surface modification for triggered release

code	materials	type	tech	species	Comments
2011LM&b	B	A	XPEEM	Rat tendon collagen	C 1s Linear dichroism
2011LR&	M	A	STXM	Monopole magnetic defects	
2011MC&	B	A	STXM	CoFe particles in fibroblasts	XRF mapping
2011MJ&	P	A	STXM	Polypropylene-clay-elastomer	Compatibilizer mapping
2011MM&a	P	A	STXM	Reverse osmosis filtration membranes	
2011MM&b	B, E	A	STXM	Protein & peptidoglycan in cell walls	
2011N	M	A	STXM	MWCNT, SWCNT	Dichroism, functionalization
2011NM&	E	A	STXM	Organic residues in ice analogs	Star-dust related
2011NW&	M	A	STXM	CoTb, FePt, FePt np	Surface-sensitive TEY
2011OG&	M	A	STXM	Carbon black sorbents	
2011PC&	M	A	STXM	Diamonoid aerogel	
2011PG&a	E	A	STXM		Graphite in old banded-Fe formations
2011PG&b	M	A	STXM	asbestos	
2011PW&	M	A	STXM	Wadsley-type Tunnel Bronze	
2011SB&	M	A	STXM	Ionomer in cathode	Fuel cell optimization
2011SB&b	M	A	STXM	Uranium compounds	
2011SC&	M	A	STXM	MWCNT and GO nanoribbons	
2011SD&	M	A	STXM	VO ₂ Nanowires	
2011SG&	B	A	Spectro-TXM	Smooth muscle cells	good C 1s, Ca 2p spectroscopy
2011SH&	M	A	STXM	Photonic crystals	
2011SS&	M	A	STXM	memresistor	Switching effects
2011TL&	M	A	STXM	Cobalt Diamond-like films	
2011TM&	M	A	CDI-ptycho	GdFe magnetic film	First resonance dichroic (XMCD) imaging
2011TS&	E	A	STXM		Aerosols from burning
2011US&	B	A	TXM	<i>Schizosaccharomyces pombe</i> ., <i>Candida albicans</i> <i>coff1-22</i> mutant strain of <i>S. cerevisiae</i> .	Cryotomography, segmentation
2011VK&	M	A	STXM	permalloy	Mag. Dynamics coupled oscillations
2011VR&	M	A	STXM	Co ₂ FeAl _{0.4} Si _{0.6} Heusler alloy	Spin structure
2011WH&A	M	A	PEEM	Magnetoelectric antiferromagnet	
2011WH&b	B	A	STXM	Sulfur(0) in S-metabolizing bacteria	tomography
2011WK&	B	A	STXM	Anoplin antimicrobial peptide	
2011WK&	B, P	A	STXM	Anoplin antimicrobial peptide/lipid membrane interactions	

code	materials	type	tech	species	Comments
2011WL&	M	A	RSoXS		Tri-block co-polymer morphology
2011WM	M	A	STXM	Redox of Pd nanoparticles	
2011WS&	M	A	STXM	Magnetic/non/magnetic structures	AFM coupling of vortex states
2011WSM	P	A	STXM	poly(9,9'-dioctylfluorene-co-benzothiadiazole) (F8BT)	Molecular orientation & order mapping
2011WZ&	M	A	STXM	SnO ₂ -CNT humidity effects	
2011YK&	E, B	A	XPEEM	Biological nanoparticles	Space filling
2011YP&	M	A	STXM	Spin driven oscillator	
2011ZW&a	M	A	STXM	Water on SnO ₂ carbon nanotubes	Humid cell
2011ZW&b	M	A	STXM	Single sheet graphene oxide NEXAFS	
2011ZW&c	M	A	STXM	Nanoparticle compatibilizers	
2011ZX&	M	A	STXM	Functionalized CNT	
2012OSS&	M	A	SPEM	SnO ₂ electronic noses	Alcohol beverage discrimination
2012AS&	M	A	STXM	Alumina zeolites	
2012B	M	R	XPEEM		Historical perspective LEEM, PEEM etc
2012BA&	M	R	STXM, SPEM	PEM-FC metal electrodes; SOFC	Review of fuel cell in situ studies
2012BD&	M	A	STXM	FIB sample prep of soft matter	Minimizing damage
2012BG&a	M	A	STEM	Mn, MnO ₂	In situ electrochem
2012BG&b	M	A	STXM	Liquid crystal - Au corrosion	In situ, X-ray fluorescence
2012BH&a	E	A	STXM	Organic-rich shales	
2012BH&b	M	A	TXM	NaTiO ₃ nanorods	Spectroscopy & linear dichroism
2012BL&	M	T	STXM	Knife-edge (FIB met glass)	Resolution profile
2012BM&	M, P	A	STXM	N-ligands to Pt	Fuel cell degradation
2012BMb	M	A	STXM	Fe-rich carbonates from lower mantle	
2012BS&	M	A	STXM	Cathode porosity in PEM-FC	Spectro-tomography
2012CA	P	A	STXM	P3HT, P61BM organic photovoltaics	
2012CB	M	A	STXM	Ghz magnetic susceptibility	Sub-micron mapping of
2012CB&	E,M	A	STXM	Geobacter – external magnetite	XMCD
2012CC&	M	R	RSoXS	Organic films	Polarized X-ray scattering (SAXS dichroism)
2012CF&	T	T	STXM		10 nm resolution
2012CI&	M	A	STXM	Cr(VI) reduction by aerobic bacteria	
2012CK	M	A	STXM		nanomagnetism
2012CKB	M	A	STXM	permalloy	sub-micron magnetization dynamics
2012DC&	M	T	XPEEM		Cryo PEEM-2 aberration corrected

code	materials	type	tech	species	Comments
2012FT&	M	A	XPEEM	LaFeO ₃	Antiferromagnetic domains
2012G	E, B	R	XPEEM	Carbonate biominerals	Biomineralization; PIC
2012GB&	M	A	TXM	TiO ₂	Spectroscopy & dichroism
2012GK&	E, B	R	XPEEM	Amorphous Calcium carbonate	Phase transitions
2012GP&	M	A	STXM	Metal-metal hip joints	Chemical speciation of particles
2012H	MEB	R	TXM, STXM, SPEM, XPEEM	many	Review of all soft X-ray techniques & many applications
2012HC&	M	A	STXM	PTB ₇ :PC ₇₁ BM solar cells	Domain composition
2012HK&	E	R	STXM	Natural organics, ferric iron interact	
2012HL&	B,M	A	XPEEM STXM	Collagen; HSA/PS-PMMA; HSA / PS-PMMA-b-PAA, HSA/PS-PLA; HSA / PIPA-SAN&polyurethane; Ubq/PEO-ppAA	Protein-polymer interactions
2012HS&	M	A	STXM	Colloidal photonic crystals	tomography
2012I	M	A	XPEEM	H ₂ , O ₂ react with VO _x	Pattern formation
2012JC&	B	A	XPEEM	Cu, Mn in prion plaques	
2012JS&	M	A	STXM	Nanocrystalline Cr ³⁺ -Doped BaTiO ₃	Phase transitions
2012K	B	A	STXM	MV-1Magnetotactic bacteria	XMCD improvements, reversal
2012KG&	M	A	XPEEM	Diamond like films	
2012KL&	E	A	STXM	MV-1 magnetotactic bacteria	
2012KO&	M	T	XPEEM	instrument	Pump probe dynamics
2012L	M	A	STXM	PMMA, stearic acid	Lithography, nanofluidics, dosimetry
2012LD&	E	A	STXM	Cu nanoparticles, river biofilms	
2012LH&a	B,M	A	XPEEM	HSA PS-PMMA-b-PAA	Protein-polymer interactions
2012LH&b	M, I	I	STXM	PMMA	Detector efficiency & dosimetry
2012LHa	M, T	T	STXM	Stearic acid melting	Heating not an issue in STXM
2012LHb	M, T	T	STXM	PMMA, PMGI layers	Nanofluidic lithography
2012LHc	M	A	STXM	carbon	Contamination rates for EUV
2012LHd	M, B	A	XPEEM, STXM	Apb, sub-6 on PS/PM-b-PAA	Review and new system
2012LK&	M	A	XPEEM		Magnetic vectometry
2012LM&	E, B	A	XPEEM	collagen	Xanes anisotropy
2012ML	M	A	XPEEM		Angle resolved XPEEM
2012MU	M	A	STXM	n-alkane epitaxy films	Substrate T effect

code	materials	type	tech	species	Comments
2012MZ&	M	A	STXM	TiO ₂ nanocrystals on C-film	
2012NN&	M	A	STXM	multiferroic Bi ₂ FeCrO ₆ nanostructures	Anti-FM and FM
2012NY	M	A	XPEEM	Cs/Ni/Cu(001)	MCD laser
2012OG	E, B	A	XPEEM	Pinctada margaritifera. mollusks	Biom mineralization; PIC
2012OH&a	M	A	XPEEM	18 nm Fe nanocubes	T-dependent magnetism
2012OH&b	E	A	STXM	chondrule	Wild 2 comet
2012OK&	E, B	A	XPEEM	Pinctada margaritifera. mollusks	T,P effects on ultrastructure
2012PO&	E	A	STXM	BoFeN1 anaerobic Fe eating bacteria	Green rust
2012PR&	M	A	STXM/SPM	PS-P3HT, Cr/Ti; CoPt ML	Combined nano-XAS,AFM
2012PS&	B	A	STXM	Ag np in sea urchin	Nanomaterials safety
2012RB&	M	A	STXM	Semicond & metal SWCNT	Linear dichroism; C 1s pi* fine structure
2012SB&	M	A	STXM	Ionomer mapping in PEM-FC	
2012SC&	M	A	STXM		Magnetic vortex dynamics
2012SE&	M	A	STXM	PTB ₇ :PC ₇₁ BM solar cells	Oligomeric compatibilizers
2012SG&	B	I	TXM	Algae, tomo of cell	Bessy full field TXM, spectroscopy
2012SL&a	E	A	STXM	Organics in soil	
2012SL&b	E	A	STXM	Organics in soil	
2012SW&a	M	A	STXM	PBTTT solar cells	Domain mapping
2012SW&b	M	A	SPEM	Graphene, Bi ₂ Te ₂	Nano-ESCA
2012WA	M	R	STXM	Organic materials	Review & overview
2012WCH	M	A	XPEEM	Pentacene (Pn) , Co/Pn, Pn/Co	
2012WH&	M	A	STXM		Magnetic vortex dynamics
2012WMR	M	R	STXM	F8BT, PFB	Organic semiconductors & solar cells; bulk-surface
2012WS&	M	A	STXM		Magnetic vortex dynamics
2012WSK	M	A	XPEEM	titanium alloy (Ti-6Al-4V)	dimpling
2012WT&	M	A	XPEEM	pentacene	
2012WW&	M	A	STXM	ZnS/ZnO nano-heterostructure	
2012WW&b	M	A	STXM		Gaussian noise filter
2012YC&	M	A	RSoXS		Organic PV materials
2012ZA&	E	A	STXM	NH ₄ SO ₄ , adipic acid particles	Water uptake in aerosol particles
2012ZM&	M	A	XPEEM	SiO _x / InAs(111)B; GaP(111)	Spin resolved, band mapping
2012ZP&	M	A	STXM	Spin-cross over Fe adsorbate	
2012ZW&	M	A	STXM	TiO ₂ -decorated 2-wall CNT	

code	materials	type	tech	species	Comments
2013AOL	M	A	XPEEM	AA 6061 aluminum	aging, strain rates
2013BG&	M	A	STXM	Au-Mn electrodeposition	
2013BW&	M	A	STXM	CNT	Disorder , tube-tube interactions
2013CL&	M	A	STXM	PTB7:PC ₇₁ BM solar cells	Domain composition
2013CL&	M	A	RSoXS	PTB7:PC71BM	Organic PV materials
2013FH&	E	A	STXM	Cr(III)-Doped In2O3 Nanocrystals	
2013GK&a	M	A	STXM	Open, using ionic liquids	In situ echem cell description
2013GK&b	M	I	STXM		8-detector XRF system Twinmic
2013GM&	B	A	STXM	Magnetic particles	Nanomaterials safety
2013GR&	E	A	STXM	kerogens	e-beam radiation damage – interstellar effect
2013KBH	B	A	STXM	MV-1 magnetotactic bacteria	Magnetic reversal anomaly
2013LH	M	A	STXM	PMMA / PMGI	Nanofluidic channel
2013LW&	M	A	STXM	PMMA	28 nm minimum line write
2013MA	M	R	STXN, RSoXS	Polymer semiconductor films	
2013MB&	M	A	STXM	Silicate glass - iron	
2013MC&	M	I	STXM	Au-Mn electrodeposition	
2013MD&	M	A	STXM	Ferrous archaeology artefacts	corrosion
2013MM&	M	I	STXM-ptycho	ptychography	Random phase illumination
2013NB&	M	A	STXM	FeOx on CNT	
2013ND&	B	A	STXM		Nanomaterials safety
2013PG&	B	A	STXM	Asbestos & Fe in lung tissue	
2013PG&	B	A	STXM	Cerebral Fluorodeoxy D-Glucose Metabolism imaged by F XRF	
2013PV&	B	A	STXM	Metals in buckwheat	Quantitative (wt%)
2013RE&	B	A	STXM	<i>Noccaea praecox (Brassicaceae)</i>	metal hyperaccumulation
2013RM&	M	A	STXM	Kaolinite, metallic iron	
2013RSF	M	A	STXM	Ag-TCNQ salts	Role of solvent in crystallization mechanism
2013SCH	E	A, R	STXM		Organics in soil, metal redox coupling
2013TS&	M	A	RSoXS	Effect of fluorination	Organic PV materials
2013WZ&	M	A	STXM	Single sheet graphene – Co3O4	
2013ZW&a	M	A	STXM	Graphidyne	
2013ZW&b	M	A	STXM	LiMn0.75Fe0.25P4 nanorod graphene	