

Abbreviations and acronyms

Å	angstrom	ESRF	European Synchrotron Radiation Facility, Grenoble, France
ADFA	Australian Defence Force Academy	eV	electron volt
AES	Auger electron spectroscopy	EXAFS	extended x-ray absorption fine structure
AINSE	Australian Institute of Nuclear Science and Engineering (now ANSTO)	FTIR	Fourier Transform Infrared spectroscopy
ALS	Advanced Light Source, Berkeley, USA	GeV	giga electron volts
AMD	acid mine drainage	HARMST	high aspect ratio micro systems
AMIRA	Australian Mineral Industry Research Association	ID	insertion device
AMRFP	Access to Major Research Facilities Program	IMAC	International Machine Advisory Committee
ANBF	Australian National Beamline Facility	IP	intellectual property
ANSTO	Australian Nuclear Science and Technology Organisation	IR	infrared
APECS	Auger photoemission coincidence spectroscopy	ISAC	International Scientific Advisory Committee
APS	Advanced Photon Source, Chicago, USA	KB	Kirkpatrick-Baez (mirror)
ARC	Australian Research Council	keV	kilo electron volts
ARUPS	Angular resolved ultraviolet photoelectron spectroscopy	LICR	Ludwig Institute for Cancer Research
ASRP	Australian Synchrotron Research Program	LIGA	x-ray lithography, electroforming (German: Galvanoformung) and moulding (German: Abformung)
BESSY	Berliner Elektronenspeicherring-Gesellschaft für Synchrotron Strahlung m. b. H. (Berlin electron storage ring company for synchrotron radiation), Berlin, Germany	LINAC	linear accelerator
CD	circular dichroism	MAD	multiple wavelength anomalous dispersion
CLS	Canadian Light Source, Saskatoon, Canada	MEMS	micro-electro-mechanical system/s
CMR	colossal magneto-resistance	μ	micron
CRC	Cooperative Research Centre	MNRF	Major National Research Facilities
CSES	Centre for Strategic Economic Studies	MPW	multipole wiggler
CSIRO	Commonwealth Scientific and Industrial Research Organisation	mrad	milliradians
CT	computed tomography	MRT	microbeam radiation therapy
CVD	chemical vapour deposition	MXCD	magnetic x-ray circular dichroism
Diamond	Diamond synchrotron light source, Chilton, UK	NEXAFS	near edge x-ray absorption fine structure
DSTO	Defence, Science and Technology Organisation	NHMRC	National Health and Medical Research Council
Elettra	Elettra Sincrotrone, Trieste, Italy	nm	nanometre
EPR	electron paramagnetic resonance	NMR	nuclear magnetic resonance
		nmrad	nanometre radians
		NRA	nuclear reaction analysis
		NSAC	National Scientific Advisory Committee
		NSLS	National Synchrotron Light Source, Brookhaven, USA

NSRRC	National Synchrotron Radiation Research Centre, Hsinchu, Taiwan	SSRL	Stanford Synchrotron Radiation Laboratory, Menlo Park, USA
PAT	photon activation therapy	Third generation	a synchrotron light source with insertion devices for higher intensity
PD	powder diffraction	THz	terahertz
PDF	pair distribution function	UHV	ultra high vacuum
PEEM	photoelectron emission microscopy	USAXS	ultra small angle x-ray scattering
PIXE	particle induced x-ray emission	UV	ultraviolet
PMT	Photomultiplier tubes	VUV	vacuum ultraviolet light
PX	protein crystallography	WAXS	wide angle x-ray scattering
SAXS	small angle x-ray scattering	WEHI	Walter and Eliza Hall Institute for Medical Research
SLS	Swiss Light Source, Villigen, Switzerland	XAES	x-ray excited Auger electron spectroscopy
SPEAR 3	new storage ring under construction at SSRL, a division of Stanford Linear Accelerator Center, Stanford University, Menlo Park, USA	XAFS	x-ray absorption fine structure
SPring-8	an acronym for 'Super Photon ring – 8GeV', Japan, the world's largest and most powerful synchrotron facility	XANES	x-ray absorption near edge structure
SR	synchrotron radiation	XAS	x-ray absorption spectroscopy
SRCD	synchrotron radiation circular dichroism	XES	x-ray emission spectroscopy
SRIR	synchrotron radiation infrared	XPEEM	x-ray photoelectron emission microscopy
SRIXE	synchrotron radiation induced x-ray emission	XPS	x-ray photoelectron spectroscopy
SRS	Synchrotron Radiation Source, Daresbury, UK	XRD	x-ray diffraction
		XRF	x-ray fluorescence