Soft X-ray Photochemistry

Beamline : BL27SU

Person in charge: T. Sekiguchi
Tel: 07915-8=1843
Fax: 07915-8-0830
e-mail: tsekiguc@spring8.or.jp

H. Ohashi
: 07915-8-1847
: 07915-8-0830
: hohashi@spring8.or. jp

Subgroups:
Soft X-ray Photochemistry
Soft X-ray CVD
Atomic and Molecular Physics

Scientific Applications:
High resolution molecular spectroscopy,
Photoionization dynamics by various correlation measurements,
Dynamics of inner-shell excited molecules,
Production and dynamics of novel core-excited states
by SR(UR)-laser double resonance techniques,
Site-specific dissociation processes of adsorbed molecules,
Growth of thin film of functional material,
Micro fabrication by functional material etching,
Clarification of the reaction mechanics for depositon and
process.

Source Characteristics:
Figure-8 type linear undulator
λu=100mm, N=44
Tunable range: 0.5~5keV
Peak brilliance: 1.1×10^{18} ph/s/mrad^2/mm^2/0.1% b.w.
at 500eV(I=100mA)
Total power: 2.7kW at 1st harmonic (500eV)
Power density: 1.7kW/mrad^2 at 1st harmonic (500eV)

X-rays at sample:
Energy range: 0.5-2keV
Linearly polarized
Energy resolution: $\Delta E/E=10^{-4}$
Beam size: 0.5×0.5mm^2
Photon flux: 10^{12} ph/s
microbeam capability of several-some tens μm diameter
in the energy range of 0.5-5keV

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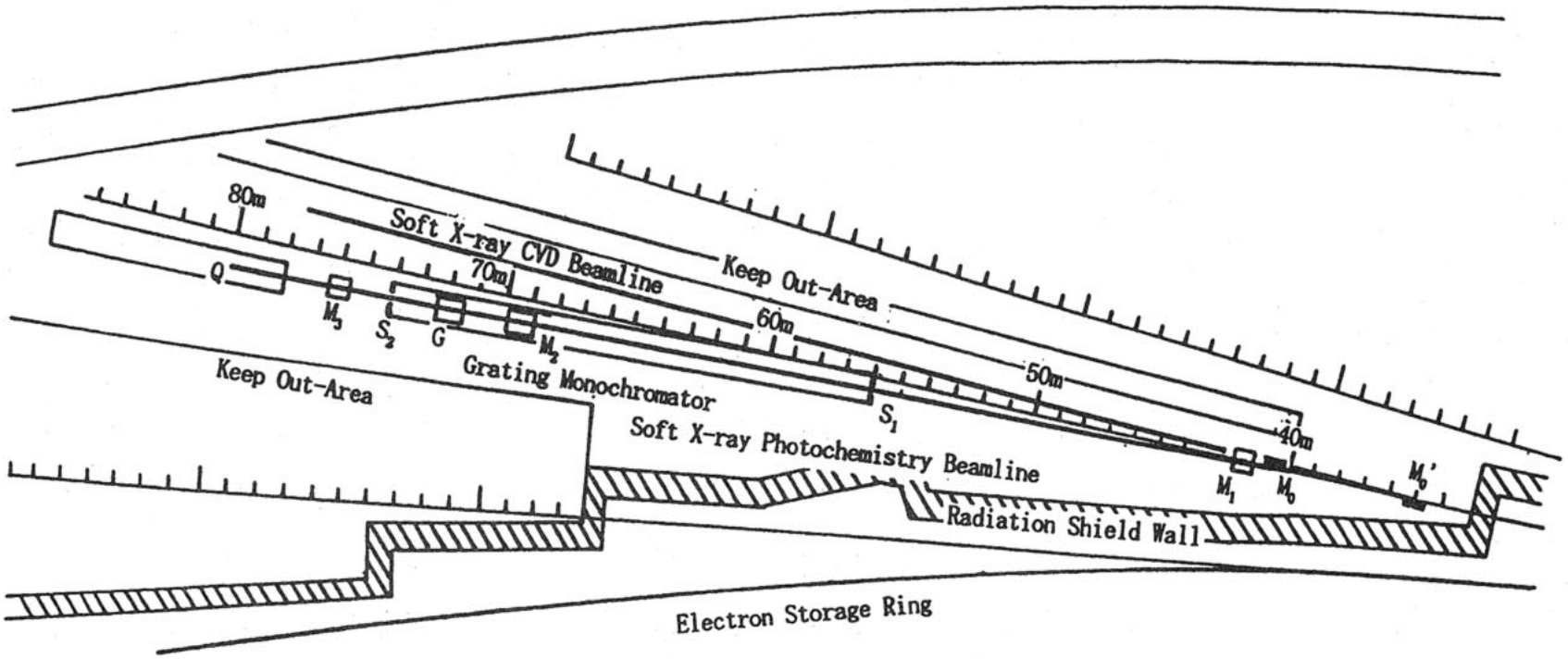

M_0, M_0' :Horizontally deflecting mirror, M_1:Vertically focussing mirror
Monochromator/ S_1:Entrance slit, S_2:Exit slit, M_2:Focussing mirror, G:Grating
M_3:refocussing mirror, Q:Sample position