

Materials List for:

# Multi-photon Intracellular Sodium Imaging Combined with UV-mediated Focal Uncaging of Glutamate in CA1 Pyramidal Neurons

Christian Kleinhans<sup>\*1</sup>, Karl W. Kafitz<sup>\*1</sup>, Christine R. Rose<sup>1</sup>

<sup>1</sup>Institute of Neurobiology, Heinrich Heine University Düsseldorf

\*These authors contributed equally

Correspondence to: Christine R. Rose at [rose@uni-duesseldorf.de](mailto:rose@uni-duesseldorf.de)

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## Materials

Name	Company	Catalog Number	Comments
Borosilicate-glass capillaries	Hilgenberg	1405059	75 x 2 mm, wall thickness 0.3 mm
Camera	Jenoptik	ProgRes MF	IR-DIC compatible camera
Deconvolution software	SVI	Huygens Professional X11	
Fiber optic spectrometer	Ocean Optics	USB 4000	Miniature fiber optic spectrometer
Filter tubes	VWR		cenrifugal filter, 0.2 µm
Imaging software	Olympus Europe	Flowview Ver 5.0c, Tiempo	
IR beam power controller	Custom built		Laser beam intensity control + fast switch to zero on flyback via pockels cell
IR laser	SpectraPhysics	Mai-Tai	fs-pulsed Ti:Sa tunable laser (710 - 990 nm); CAUTION
IR power monitor	Custom built		
Micromanipulator	Burleigh	PCS 5000	
Microscope/Imaging System	Olympus Europe	BX51WI/FV300	Both, the microscope and the imaging systems were strongly modified
ND filter wheel	Newport	50Q04AV.2	UV fused silica, optical density 0.05 - 2.0
Objective	Nikon Instruments Europe	NIR Apo 60x/1.0w	
Patch clamp amplifier	HEKA	EPC-10	
Pipette puller	Narishige	Model PP-830	
Pneumatic drug ejection system	NPI Electronic	PDES-DXH	
Pockels cell	Conoptics	350-80 LA-BK	EOM, used as fast switch and for power adjustment
Pockels cell driver	Conoptics	M302-RM	High voltage differential amplifier
Shutter	Vincent Associates	LS6ZM2	ALMgF <sub>2</sub> -coated BeCu blades
Shutter controller	Custom built		
Shutter driver	Vincent Associates	Uniblitz VCM D1	
Slicer/Vibratome	Thermo Scientific	Microm HM 650 V	
Uncaging software	Rapp OptoElectronic	UGA40 1.1.2.6 + NetCam	
UV laser	Rapp OptoElectronic	DL-355/10	cw DPSSL Laser, 355 nm; 10 mW; CAUTION
UV laser scanning system	Rapp OptoElectronic	UGA 40	Galvanometric scanning system
Name of Compound	Company	Catalog Number	Comments/Description

CNQX	Sigma Aldrich	C-127	AMPA receptor antagonist; CAUTION
DL-AP5	Alfa Aesar	J64210	NMDA receptor antagonist; CAUTION
SBFI K <sup>+</sup> salt	Teflabs	OO32	
TTX	Ascent Scientific	Asc-055	Inhibitor of voltage-dependent Na <sup>+</sup> channels; CAUTION
NMI-caged-L-Glutamate	Torcis	1490	Caged glutamate released upon UV absorption