

1. Record Nr.	UNINA9910451265103321
Titolo	Structural and functional organization of the synapse [[electronic resource] /] / edited by Johannes W. Hell and Michael D. Ehlers
Pubbl/distr/stampa	New York, : Springer, c2008
ISBN	1-281-51249-4 9786611512491 0-387-77232-4
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (814 p.)
Altri autori (Persone)	EhlersMichael D HellJohannes W
Disciplina	612.81
Soggetti	Neural transmission Synapses Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Diversity in Synapse Structure and Composition -- The Role of Glutamate Transporters in Synaptic Transmission -- Structure and Function of Vertebrate and Invertebrate Active Zones -- Neurotransmitter Release Machinery: Components of the Neuronal SNARE Complex and Their Function -- The Molecular Machinery for Synaptic Vesicle Endocytosis -- Initiation and Regulation of Synaptic Transmission by Presynaptic Calcium Channel Signaling Complexes -- Adhesion Molecules at the Synapse -- Dendritic Organelles for Postsynaptic Trafficking -- Structure and Mechanism of Action of AMPA and Kainate Receptors -- Cellular Biology of AMPA Receptor Trafficking and Synaptic Plasticity -- Structure and Function of the NMDA Receptor -- Molecular Properties and Cell Biology of the NMDA Receptor -- Surface Trafficking of Membrane Proteins at Excitatory and Inhibitory Synapses -- Scaffold Proteins in the Postsynaptic Density -- Ca <sup>2+</sup> Signaling in Dendritic Spines -- Postsynaptic Targeting of Protein Kinases and Phosphatases -- Long-Term Potentiation -- Homeostatic Synaptic Plasticity -- Ubiquitin and Protein Degradation in Synapse Function -- Signaling from Synapse to Nucleus -- Molecular

Organization of the Postsynaptic Membrane at Inhibitory Synapses --  
Acid-Sensing Ion Channels (ASICs) and pH in Synapse Physiology --  
Glia as Active Participants in the Development and Function of Synapses  
-- Plasticity of Dentate Granule Cell Mossy Fiber Synapses: A Putative  
Mechanism of Limbic Epileptogenesis -- Stroke – A Synaptic Perspective  
-- and Pathological Pain.

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Sommario/riassunto

Synapses play a central role in the brain by mediating signal transmission between neurons. This book provides a fundamental description of the synapse by leading experts in the field. Each individual synapse carries out its numerous functions in a tiny space, thereby requiring an exquisite molecular and functional arrangement. This book describes the molecular structure and cellular function of central synapses in the brain, providing a detailed view of the brain's fundamental unit of information storage.

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