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Nota di contenuto	Part I. Introduction and mechanisms of action -- Chapter 1. Historical aspects of transcranial electric stimulation -- Chapter 2. Basic mechanisms of transcranial alternating current and random noise stimulation -- Chapter 3. Physiology of transcranial direct and alternating current stimulation -- Chapter 4. Animal Models of tES: Methods, Techniques and Safety -- Chapter 5. Animal Studies on the Mechanisms of Low-Intensity Transcranial Electric Stimulation -- Part II. Research Methods -- Chapter 6. TMS-evoked EEG Response in Neuropsychiatric Disorders -- Chapter 7. Multimodal Association of tDCS with Electroencephalography -- Chapter 8. tDCS and Magnetic Resonance Imaging -- Chapter 9. tDCS and Functional Connectivity -- Chapter 10. The value of neuroimaging for treating depression with brain stimulation -- Chapter 11. Target Engagement with Transcranial Current Stimulation -- Chapter 12. Cerebellar and Spinal tDCS -- Chapter 13. Precision targeting of neural networks with tDCS informed by brain mapping -- Chapter 14. Clinical research and methodological aspects for tDCS research -- Part III. TDCS in the life cycle -- Chapter 15. tDCS in Child and Adolescent Psychiatry -- Chapter 16. Transcranial Direct Current Stimulation in the perinatal period --

Chapter 17. Modulating Cognition in Healthy Young Adults with tDCS -- Chapter 18. tDCS in exercise, sport performance and recovery process -- Chapter 19. Transcranial Direct Current Stimulation in Social and Emotion Research -- Chapter 20. Neurodegenerative cognitive disorders -- Part IV. Applications of tDCS in neuropsychiatric disorders -- Chapter 21. Mood disorders: clinical results -- Chapter 22. Effect of transcranial direct current stimulation on hallucinations in patients with Schizophrenia -- Chapter 23. Schizophrenia: Negative Symptoms -- Chapter 24. OCD, Anxiety Disorders, and PTSD -- Chapter 25. Cognitive functions in substance-related and addictive disorders -- Chapter 26. Transcranial Direct Current Stimulation in Substance Use Disorders -- Chapter 27. Attention-deficit/hyperactivity disorder -- Chapter 28. Cognitive effects of transcranial direct current stimulation in clinical trials -- Chapter 29. Epilepsy -- Chapter 30. Pain syndromes -- Chapter 31. Transcranial direct current stimulation for the treatment of tinnitus -- Chapter 32. Transcranial direct current stimulation in disorders of consciousness -- Chapter 33. TDCS in the Context of Rehabilitation -- Part V. The clinical use of tDCS -- Chapter 34. Safety and tolerability -- Chapter 35. Home-based tDCS: applications and approaches, design, feasibility and safety -- Chapter 36. Ethical Aspects of tDCS Use in Neuropsychiatry and the Risk of Misuse -- Chapter 37. tDCS-Pharmacotherapy interactions -- Chapter 38. Combination of tDCS with Psychotherapy and Neurobehavioral Interventions: Systematic Review and Mechanistic Principles for Future Clinical Trials -- Chapter 39. Regulatory aspects.

Sommario/riassunto

The 2nd edition of this book incorporates the tremendous clinical advances that have occurred in the field of transcranial direct current stimulation (tDCS) over the past 5 years. Since the 1st edition was published, the clinical use of tDCS has moved from its infancy, and is now in a thrilling new phase with numerous possibilities as well as challenges. tDCS is a technique that excels in terms of safety and tolerability, and within a few years, novel technological developments will allow its use at home. At the same time, large, phase III trials have been exploring the clinical efficacy of tDCS, the results of which have been published in leading journals such as the New England Journal of Medicine and JAMA Psychiatry. This 2nd edition summarizes the state of the art of the field. Written by leading experts in the field, the book is divided into 5 parts: Introduction and Mechanisms of Action; Research Methods; tDCS in the life cycle; Applications of tDCS in neuropsychiatric disorders (further divided into Psychiatry and Neurology); and The clinical use of tDCS. It also includes several new chapters, covering topics such as precision stimulation of tDCS; combination of tDCS with different neuroimaging modalities; and use of tDCS in new clinical conditions. Moreover, all chapters have been rewritten and updated. This book is of interest to psychiatrists, neurologists and neuroscientists new to the field as well as those with a background in tDCS who want to increase their understanding of particular psychiatric conditions.