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Nota di contenuto	Preface; Satellite Events Incorporated in WC2015; Committees; Sponsors; Table of Contents; Invited Plenary Lectures; About the First Industrial Scale PEF - Plants and Heinz Doevenspeck'sRole - A Historical Review; I. INTRODUCTION; II. DOEVENSPECK`S PROJECTSFROM 1958 UNTIL 1983; III. COOPERATION DOEVENSPECK- KRUPP UNTIL 1993; Harnessing the Structure Modifying Potential of Pulsed ElectricFields (PEF) - Food Processing Examples in Product Stabilization,Process Acceleration and Compound Extraction; I. INTRODUCTION; II. CASE STUDY 1: PEFIN HURDLE PRESERVATION

III. CASE STUDY 2: PEF IN SPOREINACTIVATIONIV. CASE STUDY 3: PEF IN HYDROLYSISTERMINATION; V. CASE STUDY 4: PEF IN WASTEVALORISATION; VI. CASE STUDY 5: PEFIN MEAT TENDERISATION; VII. CASE STUDY 6: PEF IN MEAT CURING; VIII. CONCLUSIONS; Fundamental and Applied Aspects of Pulsed Electric Fieldsfor Microbial Inactivation; I. INTRODUCTION; II. BASICS PRINCIPLES OF MICROBIALINACTIVATION BY PULSED ELECTRIC FIELDS; III. FACTORS AFFECTING MICROBIALINACTIVATION BY PULSED ELECTRIC FIELDS; IV. FOOD PRESERVATION BY PULSEDELECTRIC FIELDS
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IV. ABIOTIC HGT MECHANISMS IN NATURE?

Sommario/riassunto

This volume presents the proceedings of the 1st World Congress on Electroporation and Pulsed Electric Fields in Biology, Medicine and Food & Environmental Technologies (WC2015). The congress took place in Portorož, Slovenia, during the week of September 6th to 10th, 2015. The scientific part of the Congress covered different aspects of electroporation and related technologies and included the following main topics: · Application of pulsed electric fields technology in food: challenges and opportunities · Electrical impedance measurement for assessment of electroporation yield · Electrochemistry and electroporation · Electroporation meets electrostimulation · Electrotechnologies for food and biomass treatment · Food and biotechnology applications · In vitro electroporation - basic mechanisms · Interfacial behaviour of lipid-assemblies, membranes and cells in electric fields · Irreversible electroporation in clinical use · Medical applications: electrochemotherapy · Medical applications: gene therapy · Non-electric field-based physical methods inducing cell poration and enhanced molecule transfer · Non-thermal plasmas

for food safety, environmental applications and medical treatments
· PEF for the food industry: fundamentals and applications
· PEF proce ss integration - complex process chains and process combinations in the food industry · Predictable animal models
· Pulsed electric fields and electroporation technologies in bioeconomy · Veterinary medical applications.