EARTHSCAN REFERENCE COLLECTIONS

RENEWABLE ENERGY

VOLUME II

RENEWABLE ENERGY TECHNOLOGIES I

EDITED BY

BENT SØRENSEN

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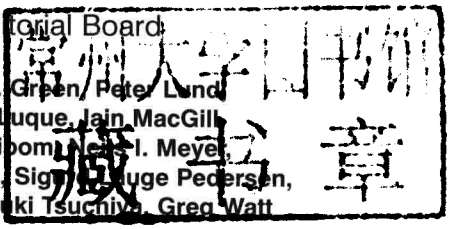

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Renewable Energy

Volume II

List of Abbreviations

Å	angstrom (10^{-10}m)
AFM	atomic force microscopy
a-Ge	amorphous germanium
AR	antireflection coating
a-Si	amorphous silicon
ATES	aquifer thermal energy store
ATR-FTIR	attenuated total reflectance–Fourier transform infrared
BAPV	building-applied photovoltaics
BIPV	building-integrated photovoltaics
BOS	balance-of-systems
BTES	borehole thermal energy store
Btu	British thermal unit (1055J)
CB	conduction band
CDI	carrier density imaging
CEC	Commission of the European Communities
CNRS	Centre National de la Recherche Scientifique (National Center of Scientific Research)
C–PCM	conductor-like polarizable continuum model
CSHPSS	central solar heating plants with seasonal heat storage
CSU	Colorado State University
Cz	Czochralski
DC	direct current
DEZ	diethylzinc
DFT	density functional theory
DSG	direct steam generation
EBIC	electron-beam-induced current
EDT	1,2-ethanedithiol
EMF	electromotive force
EPD	etch pit density
EQE	external quantum efficiency
ERDA	Energy Research and Development Administration
eV	electron volt
FCV	fuel cell vehicle
FET	field effect transistor

FF	fill factor
ft	foot (0.3m)
FZ	float zone
GWTES	gravel-water thermal energy store
HFCV	hybrid fuel cell vehicle with regenerative braking
HFCVP	hybrid fuel cell vehicle with regenerative braking and rooftop PV
HOMO	highest occupied molecular orbital
hp	horsepower (745.7W)
IB	intermediate band
IEA	International Energy Agency
in	inch (2.54cm)
IPCE	incident photon-to-current conversion efficiency
IQE	internal quantum efficiency
IR	infrared
ISES	International Solar Energy Society
ITO	indium tin oxide
kcal	kilocalorie (4184 joules)
lb	pound (0.454kg)
LBSF	local back surface field
LCP	laser chemical processing
LFC	laser-fired contacts
LP	low pressure
LUMO	lowest unoccupied molecular orbital
ly	langley (1ly/min = 697.5W/m^2)
MEG	multiple exciton generation
MIS	metal insulator conductor
MIT	Massachusetts Institute of Technology
MOCVD	metal-organic chemical vapour deposition
NC	nanocrystal
nc	nanocrystalline
NMR	nuclear magnetic resonance
NSF	National Science Foundation
P3HT	poly-3(hexylthiophene)
PCE	power conversion efficiency
PECVD	plasma-enhanced chemical vapour deposition
PEDOT:PSS	poly(3,4-ethylenedioxythiophene) poly(styrenesulphonate)
PERC	passivated emitter and rear cell
POC	proof of concept
ppmv	parts per million by volume
PV	photovoltaic(s)
QD	quantum dot

QY	quantum yield
R&D	research and development
RANN	Research Applied to National Needs (NSF)
RF	radio frequency
RTSE	real-time spectroscopic ellipsometry
SEGS	solar electric generation system
SQ	Shockley and Queisser
SRH	Shockley–Read–Hall
SS	stainless-steel substrate
st	steradian
SWE	Staebler-Wronski effect
TCO	transparent conducting oxide
TDDFT	time-dependent density functional theory
TFT	thin-film transistor
TOP/TOPO	trioctylphosphine and trioctylphosphine oxide
TPD	N,N′-diphenyl-N,N′-bis(3-methylphenyl) (l,l′-biphenyl-4,4′-diamine)
UV	ultraviolet
VB	valence band
VHF	very high frequency
μc	microcrystalline
Ω/sq	ohms per square (sheet resistance)

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