

- direct current (DC) 3, 5, 34
- direct irradiance 928
- direct irradiation 913
- direct subsidies (buy-downs) 1094–5
- dirt effects 934–7
- dirty surfaces 944
- Discovery Science Center, Santa Ana, Los Angeles 1018
- dislocations 184–5, 218
- dispersion parameter 532
- dispersive transport 532
- displacement current 81
- distributed power generation 53
- distribution coefficients 182
- distribution function of monthly electricity consumption 963
- diurnal variations of ambient temperature 933–4
- divergence operator 116
- doctor blade technique 679
- domestic appliances, energy-saving 793–4
- donor funding 1086–7
- donors 69–70, 186, 220
- doping 69, 216, 518
 - silicon alloys 528
- doping level and type 262–3
- double-layer capacitors 824–6, 859
- double-sided textured (DT) cells 329, 331
- drift 78–9
 - of electrons 534
 - of holes 531, 534
- dummy wafers 178
- dust-covered surface 935
- dye fixation onto TiO₂ film 680
- dye-sensitized solar cells (DSSC) 663–700
 - approach to commercialization 691–4
 - background 663–4
 - cell assembly 681–2
 - cell performance 681–2
 - characteristics 678
 - charge recombination 675
 - charge-transfer kinetics 673–8
 - counter electrode 669, 681
 - efficiency improvement 695–6
 - electron injection process 673–5
 - fabrication 678–82
 - materials 664–70
 - metal complex photosensitizers 683–7
 - module fabrication 694
 - natural dye photosensitizers 687–8
 - new developments 682–90
 - new dye photosensitizers 683–8
 - new electrolytes 688–9
 - new oxide semiconductor film photoelectrodes 683
 - operating principle 670
 - organic dye photosensitizers 687–8
 - photovoltaic performance 672–3
 - primary processes 670–2
 - prospects 695–6
 - quasi-solid-state 689–90
 - recombination between injected electrons and tri-iodide ions (dark current) 676–7
 - redox electrolyte 681
 - regeneration of oxidized photosensitizers 676
 - sealing materials 670
 - solid electrolyte 696
 - solid-state 689–90
 - stability 691–4
 - structure 664–70
- E&Co 1109
- Earth–Sun position 912
- ecliptic plane 907, 909
- ecological dimension 48–54
- economic analysis 971–1003
 - annual energy production 983
 - annual energy value 984
 - capital recovery factor (CRF) 980
 - case studies 984–97
 - cash flows 973, 977
 - discount rate 975
 - discounted payback (DPB) 979, 984
 - energy payback 997–9
 - financial evaluation of system 976
 - general methodology 980–4
 - inflationary effects 977
 - internal rate of return 979
 - key concepts 973
 - key technical and financial parameters 986
 - levelized bus bar energy cost (LBEC) 980
 - levelized energy cost (LEC) 980, 983
 - net cash flow 978
 - overview 972–3
 - payback 984
 - payback period in years 979
 - present value or present worth 974–7
 - return on equity (ROE) 992
 - total capital requirements for central station plants 993–4
 - value of system 975
 - see also* cost(s); financing of PV growth
- Edge-defined Film-fed Growth (EFG) 230, 232, 234–5, 239–41, 244–5, 251, 288
- Edge-Stabilized Ribbon (ESR) 231
- Edge-Supported Pulling (ESP) 231
- effective concentration 803