

Index

Note: Page numbers of article titles are in **boldface** type.

A

- Alginate, laying on tabletop, 480, 481
- Alloys, Ag-Pd, 509
 - application of porcelain to, 503–505
 - Au-Cu-Ag, 507–508
 - Au-Pu, 507
 - biocompatibility of, 502–503
 - casting, **499–512**
 - American Dental Association classification of, 505–506, 507
 - classes of, currently available, 505–510
 - clinical selection of, 510–511
 - Co-Cr, 510
 - color of, 500
 - corrosion of, 502
 - for fixed prosthetic restorations, 499
 - grain size of, 501
 - high-noble, 506–508
 - interactions with environment, 503
 - Ni-Cr-Be, 509, 510
 - noble, 508–509
 - Pd-Ag, 509
 - Pd-Cu-Ga, 508–509
 - phase structure of, 500
 - predominantly base-metal, 509–510
 - properties of, important to clinical performance, 500–505
 - soldering of, 505
 - solidus and fit of, 501–502
 - strength and hardness of, 501

C

- Cardiovascular patients, identification of, 436
- Casting alloys, **499–512**
 - American Dental Association classification of, 505–506, 507
- Casts, hand articulation of, 473, 474, 482
 - heels of, touching, 482
 - movement during articulation, 483, 485
 - with major blebs on occlusal surfaces, 481

Ceramics, dental. See *Dental ceramics*.

- Color, color vision confusion and, 343
 - hue as attribute of, 344, 345
 - light and, 342
 - organization and specification of, 343–344
 - perception of, 342–343
 - shade communication and, 355
 - visual selection of shade and, 345

- Color matching, advances in, **341–358**
 - light sources for, 344–346
 - visual shade-matching environment and, 344–346

- Colorimeters, filter, digital cameras as, 349
 - shade-taking devices and, 348

- Crown(s), all-ceramic, 422–423, 425
 - reduction depth for, 377, 378
 - shoulder finish lines for, 371, 374
- all-metal, chamfer finish lines for, 370, 371
 - depth of reduction for, 374–375
- metal-ceramic, 422, 424, 425
 - chamfer finish lines for, 370, 372–373
 - reduction depth for, 375, 376, 377
 - reduction depths for, 372–377
 - resistance form and, 387

D

Dental casting alloys, **499–512**

- Dental ceramics, all-ceramic systems, 521
 - survival literature for, 523–526
 - clinical concepts of, and performance issues in, 521–526
 - versus metal-ceramic systems, advantages of, 521–522
- composition, uses, and commercial examples of, 514, 515
- current thinking and trends in, **513–530**
 - etching and bonding of, 527
 - for inlay/onlay restorations, 524–525

Dental ceramics (*continued*)

- for multi-unit prostheses, 526
- for single-unit crowns, 525–526
- for veneer restorations, 523–524
- fracture toughness and, 520
- glass, 516
- glazing of, versus polishing of, 527
- metal-ceramic systems, 521–522
- metal in "strengthening" of, 520–521
- particle-filled glasses, 514–516
- polycrystalline, 516–517
- practical aspects of, 526–528
- predominantly glassy, 513–514
- repair of, 527–528
- science of, and fracture, background concepts of, 513
- simple failure statistics on, decisions based on, 522–523
- strength of, 519–520
- substructure for, 517–518
- transformation-toughened zirconium oxide, 518–519
- translucency of, 526

Dentures, all-ceramic fixed partial, contemporary, **531–544**

- dimensions for connectors in, 532
- evolution of, 533–534
- framework design for, 532–533
- in vitro study of, 532
- patient selection and treatment planning for, 535–536
- recent core materials and technologies for, 534–535
- retrospective studies of, 531–532
- Y-TZP-based, clinical procedures for, 541
- design and manufacturing of, 537, 538
- features of, 538–540
- limitations of, 540–541

Dowel cores, indirect, for retention of restoration, 458, 459, 466–467

Dual-arch impression technique, 463–465

EEndodontically treated teeth, restoration of, **397–416**

Epinephrine, as gingival displacement medicament, 435–436, 437

F

- Fiber-reinforced composite prosthesis(es), **545–562**
 - advantages of, 552, 555
 - anterior full-coverage, 545, 546

- cantilever anterior bridge over healing extraction site, 560–561
- chairside, 552–559
- clinical cases illustrating, 559, 560–561
- dual-wing anterior chairside bridge using, 559, 560
- fiber architecture for, 545–548
- flexure properties of, 548
- for replacement of missing premolar, 561
- implant-retained, 551–552, 553, 554
- laboratory-fabricated, 548–552
- material for, 545

Fracture(s), toughness of dental ceramics and, 520

GGingival displacement, current concepts in, **433–444**

- for effective impression, 433
- technique(s) of, classification of, 434–435
 - deficient, 433
 - double cord, 439–440
 - "every other tooth," 441
 - infusion, 440–441
 - new, and new materials, 441
 - single cord, 437–438
- trimming gypsum die in, 435

H

Hue, as attribute of color, 344, 345

Hydrocolloid impression materials, reversible, 446, 449

I

- Impression(s), as communication aid with dental technicians, 460–464, 467
 - custom trays for, 450–451
 - deficiencies of, causes of, 445
 - disinfection of, 454
 - dual-arch technique for, 463–465
 - effective, for gingival displacement, 433
 - final, second pour of, 484–485
 - putty/wash techniques for, 456, 459–462
 - segmental technique for, 465
 - tooth/implant, 456, 457, 458, 466
 - triple tray, position of mouth for, 482–483, 484

- Impression material(s), accuracy of, evaluation of, 446
 - adequate mixing of, 454
 - adhesion to tray, 453

and techniques, contemporary,
445–470
 cost of, 451
 dimensional stability of, 447–448
 dislodged from impression tray, 480
 elastic recovery of, 446–447
 flow and flexibility of, 448–449
 hydrophilicity of, 449–450
 ideal properties of, 446
 low-viscosity, gingival displacement in,
 434
 manipulation of, principles of, 451–454
 uniform bulk and, 452
 patient comfort and, 450–451
 polyvinyl siloxane as, 445, 446, 447,
 454–458
 advantages of, 454–455
 disadvantage of, 455
 inhibition of polymerization of,
 455–458
 pouring of, 453
 promptly, 480–481
 setting of, movement during, 479–480
 shelf-life of, 450
 viscosity control and, 453–454
 workability of, 449

Interim restoration(s), **487–497**
 basic requirements of, 487–489
 biologic requirements of, 487–488
 biomechanical requirements of, 488
 color stability of, 491
 diagnostic potential of, 488–489
 direct techniques of fabrication of,
 492–493
 exothermic reaction to, 491
 fabrication of, techniques for, 492–495
 indirect-direct technique of fabrication
 of, 494
 indirect technique of fabrication of,
 493–494
 marginal integrity of, 494–495
 materials for, 489–491
 matrices for, 492
 reinforcement of, 490
 strength and rigidity of, 489–490

Interocclusal records, materials for, 485

J

Jaw relation records, for fixed
 prosthodontics, **471–486**

L

Light sources, for color matching, 344–346

M

Margin(s), cervical, configurations of,
 419–420
 designs of, for acceptable
 marginal integrity, 421
 placement of, landmarks for,
 417–419
 providing marginal
 integrity, 420
 too deep in sulcus, 417, 418
 porcelain labial, preparation of, 426,
 428
 shoulder-bevel, 421, 422

Metals, for alloys in dentistry, 499

Molars, single-rooted, post and core
 restoration of, direct core material for,
 402–403, 404–405
 ferrule for, 403, 406
 guidelines for, 403–404
 increasing success of,
 400–401, 402

"Mush bites," 482

O

Occlusion, vertical dimension of, 485

P

Polyether impression materials, 450

Polyvinyl siloxane, as impression material,
 445, 446, 447, 454–458

Porcelain, application of, to alloys, 503–505

Prosthesis(es), fiber-reinforced composite.
*See Fiber-reinforced composite
 prosthesis(es).*
 fixed or removable, 487

Prosthesis frameworks, for fixed
 prosthodontics, 478

Prosthodontics, fixed, jaw relation records
 for, **471–486**

articulator choice and,
 478–479
 avoiding errors and
 inaccuracies in,
 479–485
 created tripod interocclusal
 record and, 474–478
 existing tripod interocclusal
 record and, 472–473,
 474
 facebow for, purpose of,
 479
 function of, 472

- Prosthodontics (*continued*)
 prosthesis frameworks for, 478
 vertical dimension of occlusion and, 471
- Pulpless teeth, molars, single-rooted, post and core restoration of. *See* *Molars*.
 single-rooted, post and core restoration of, and length of post, 398
 apical seal and, 399
 complications with, 411
 dental cements for, 409–411
 design to conserve radicular tooth structure, 400
 ferrule length and, 398–399
 fiber reinforced epoxy resin posts in, 406–408
 guidelines for posts in, 400, 401, 402
 prefabricated posts for, 405–409
 success of, 398
 woven-fiber composite materials for, 409
 zirconia posts in, 408–409

R

- Resistance form, crowns and, 387
 evaluation of, 388–389
 in tooth preparation, **387–396**
 laboratory studies evaluating, 391–392
 methods to analyze, 390–391
 methods to enhance, 392–394
 on/off nature of, 389–390
 preparation taper for, minimally acceptable, 388–390
 use of, clinical outcomes following, 387
- Restorations, esthetic, contemporary, cervical margin design with, **417–431**
 interim. *See* *Interim restoration(s)*.
 provisional, in gingival displacement, 434
- Retraction cords, in gingival displacement, 435, 436

S

- Segmental impression technique, 465
- Shade communication, color and, 355
- Shade guides, 346–347

- Shade-taking devices, 347–355
 colorimeters and, 348
 currently available, 349–353
 design of, 348
 limitations of, 353–355
 spectrophotometers and spectroradiometers, 349
- Soft tissue landmarks, impressions for communication of, 460–464, 467
- Spectrophotometers, for color measurement, 349
- Spectroradiometers, for color measurement, 349

T

- Tooth/implant impressions, 456, 457, 458, 466
- Tooth preparation(s), designing of, **359–385**
 guidelines for, 359–362
 occlusocervical/incisocervical dimension and, 362–364
 ratio of occlusocervical/incisocervical to faciolingual dimension, 364–365
 total occlusal convergence and, 359–362, 363
- Tooth (teeth), endodontically treated, restoration of, **397–416**
 preparation of, resistance form in, **387–396**
 prepared, circumferential form of, 365–366, 367, 368
 finish line form, 369–371
 finish line location, 367–369
 guidelines for preparing, 380–382
 line angle form, 377–378, 379
 reduction uniformity of, 367, 369
 surface texture of, 371, 380
 pulpless. *See* *Pulpless teeth*.
- Total occlusal convergence, 359–362, 363

V

- Veneer restorations, dental ceramics for, 523–524
- Vertical dimension of occlusion, 471

Y

- Yttrium tetragonal zirconia polycrystals, for fixed partial dentures, 531, 534–535, 537–541