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Chapter 4 Photostimulable Phosphor Image Capture

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|  |  |  | 1  P |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | H |  |  |  |  |  |  |  |  |  |  |  | 2  I |  |  |  |  |  |  |  |  |  |  |  |  | 3  P |  |
|  |  | 4  F | O | C | U | S | E | D | G | R | I | D |  |  | M |  |  |  |  |  |  |  |  |  |  |  |  | R |  |
|  |  |  | S |  |  |  |  |  |  |  |  |  |  |  | A |  |  |  |  | 5  G |  |  |  |  |  |  |  | O |  |
|  |  |  | P |  |  |  |  |  | 6  B | A | C | K | I | N | G | L | A | Y | E | R |  |  |  |  |  |  |  | T |  |
|  |  |  | H |  |  |  |  |  |  |  |  |  |  |  | I |  |  |  |  | I |  |  |  |  |  |  |  | E |  |
|  | 7  P |  | O |  |  |  |  |  |  |  |  |  |  |  | N |  |  | 8  P |  | D |  |  |  |  |  |  |  | C |  |
|  | H |  | R |  |  |  |  | 9  B |  |  |  |  |  |  | G |  |  | H |  | F |  |  |  |  |  |  |  | T |  |
| 10  C | O | L | L | I | M | A | T | I | O | N |  |  |  |  | P |  | 11  M | O | I | R | E |  |  |  |  |  |  | I |  |
|  | S |  | A |  |  |  |  | T |  |  |  |  |  |  | L |  |  | T |  | E |  |  |  |  |  |  |  | V |  |
|  | P |  | Y |  |  |  |  | D |  |  |  |  |  | 12  M | A | S |  | O |  | Q |  |  | 13  B |  |  |  |  | E |  |
|  | H |  | E |  |  |  |  | E |  | 14  A |  |  | 15  C |  | T |  |  | D |  | U |  |  | A |  |  |  |  | L |  |
|  | O |  | R |  | 16  S | U | P | P | O | R | T | L | A | Y | E | R |  | E |  | E |  |  | R |  |  |  |  | A |  |
|  | R |  |  |  |  |  |  | T |  | T |  |  | S |  |  |  |  | T |  | N |  |  | C |  |  | 17  L |  | Y |  |
|  | C |  |  |  |  |  |  | H |  | I |  |  | S |  | 18  K |  |  | E |  | 19  C | O | L | O | R | L | A | Y | E | R |
|  | E |  |  |  |  | 20  Q |  |  |  | F |  |  | E |  | V |  |  | C |  | Y |  |  | D |  |  | S |  | R |  |
|  | N |  |  |  |  | U |  |  |  | A |  |  | T |  | P |  |  | T |  |  |  |  | E |  |  | E |  |  |  |
|  | T |  |  |  |  | A |  |  |  | C |  |  | T |  |  |  |  | O |  |  |  |  | L |  |  | R |  | 21  Q |  |
|  | E |  |  | 22  C | O | N | D | U | C | T | I | V | E | L | A | Y | E | R |  |  |  |  | A |  |  |  |  | U |  |
|  | R |  |  |  |  | T |  |  |  | S |  |  |  |  |  |  |  |  |  |  |  |  | B |  |  |  |  | A |  |
|  |  |  |  |  |  | U |  |  |  |  |  | 23  F | A | S | T | S | C | A | N | D | I | R | E | C | T | I | O | N |  |
|  |  |  |  |  |  | M |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | L |  |  |  |  | T |  |
|  |  |  |  |  |  | M |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | U |  |
|  |  |  |  | 24  S | L | O | W | S | C | A | N | D | I | R | E | C | T | I | O | N |  |  |  |  |  |  |  | M |  |
|  |  |  |  |  |  | T |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | N |  |
|  |  |  | 25  S | H | U | T | T | E | R | I | N | G |  |  |  |  |  |  |  | 26  G | R | I | D | R | A | T | I | O |  |
|  |  |  |  |  |  | L |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | I |  |
|  |  |  |  |  | 27  R | E | F | L | E | C | T | I | V | E | L | A | Y | E | R |  |  |  |  |  |  |  |  | S |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | E |  |
|  |  |  |  | 28  P | H | O | T | O | S | T | I | M | U | L | A | B | L | E | P | H | O | S | P | H | O | R |  |  |  |

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| **Across**  **4.** grid in which the scatter absorbing lead lines are tilted so that, at a distance, the lines will coverage  **6.** soft polymer that protects the back of the cassette  **10.** reduction of the area of beam that reaches the patient through the use of two pairs of lead shutters  **11.** grid line or image noise pattern ; zebra pattern  **12.** milliampere-seconds  **16.** semirigid material in the imaging plate that gives the imaging sheet some strength  **19.** located between the active layer and the support that absorbs the stimulating light but reflects emitted light  **22.** layer of material that will absorb and reduce static electricity  **23.** movement of the laser along the imaging plate  **24.** movement of the imaging plate through the reader ; also known as translation or subscan direction  **25.** used to blacken out the white collimation borders in a digital image  **26.** ratio of the height of the grid line to the width of the interspace material  **27.** layer in the imaging plate that sends light in a forward direction when released in the cassette reader  **28.** phosphor that produces light when stimulated by light or x-ray photons | **Down**  **1.** layer of photostimulable phosphor that traps electrons during exposure  **2.** thin piece of plastic with several layers of material that capture and store image data  **3.** thin, tough clear plastic covering the image plate for protection of the phosphor layer  **5.** number of grid lines per inch  **7.** area within the phosphor where electrons are trapped  **8.** detects photostimulable phosphor  **9.** the number of bits stored per pixel  **13.** label attached to the cassette or to the imaging plate that identifies the plate for the purpose of matching the examination to the plate  **14.** avoidable extraneous information on the image that interferes or distracts from image quality  **15.** rigid plastic housing for the imaging plate  **17.** light amplification of stimulated emission of radiation, a device that creates and amplifies a narrow intense beam of coherent light  **18.** kilovoltage peak  **20.** failure of an imaging system to record densities  **21.** recording error in the digital image |