9. The intra-oral x-ray sensor of claim **1**, wherein at least a portion of the intra-oral radiation shield structure is composed of at least a first x-ray shielding material and a second x-ray shielding material, the second x-ray shielding material having one or more absorption edges different from the first x-ray shielding material.

10. The intra-oral x-ray sensor of claim **9**, wherein at least one of the first x-ray shielding material or the second x-ray shielding material includes at least one material that absorbs x-rays at one or more frequencies and fluoresces x-rays at one or more lower frequencies.

11. The intra-oral x-ray sensor of claim **9**, wherein at least a portion of the second x-ray shielding material is interlayered with at least a portion of the first x-ray shielding material.

12. The intra-oral x-ray sensor of claim **9**, wherein the second x-ray shielding material includes one or more K-edges, or one or more L-edges, different from the first x-ray shielding material.

13. The intra-oral x-ray sensor of claim **9**, wherein the second x-ray shielding material includes an x-ray mass attenuation coefficient different from the first x-ray shielding material.

14. An intra-oral x-ray sensor, comprising:

an x-ray image component configured to acquire intra-oral x-ray image information associated with a patient; and

an intra-oral radiation shield structure configured to reduce at least one of x-ray scattering, transmission, or re-radiation by at least 50%, wherein the intra-oral radiation shield structure includes a composition having a carrier fluid and a plurality of x-ray shielding particles each having at least a first x-ray shielding agent and a second x-ray shielding agent, the second x-ray shielding agent having one or more absorption edges different from the first x-ray shielding agent.

15. The intra-oral x-ray sensor of claim **1**, wherein a portion of the intra-oral radiation shield structure has an x-ray shielding lead equivalence of about 0.25 millimeters to about 0.5 millimeters.

16. The intra-oral x-ray sensor of claim **1**, wherein a portion of the intra-oral radiation shield structure extends outwardly beyond a terminal border of an x-ray image detector forming part of the intra-oral x-ray sensor.

17. An intra-oral x-ray sensor, comprising:

an x-ray image component configured to acquire intra-oral x-ray image information associated with a patient;

an intra-oral radiation shield structure configured to reduce at least one of x-ray scattering, transmission, or re-radiation by at least 50%; and

an x-ray backscatter component operably coupled to the x-ray image component;

wherein the x-ray image component is configured to detect backscattering, and the x-ray backscatter component is configured to modify the intra-oral x-ray image information responsive to one or more inputs from the x-ray image component indicative of the presence of backscatter.

18. The intra-oral x-ray sensor of claim **1**, further comprising:

an embedded orientation detection component configured to generate information associated with at least one of an intra-oral x-ray sensor orientation, an intra-oral x-ray sensor position, an intra-oral x-ray sensor dimension, or an intra-oral x-ray sensor centroid position.

19. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to one or more orientation sensors.

20. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to one or more local positioning system based sensors.

21. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to at least two acceleration sensors in a substantially perpendicularly arrangement.

22. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to at least one electrolytic fluid based sensor.

23. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to a two-axis tilt sensor configured to detect an intra-oral x-ray sensor pitch angle and an intra-oral x-ray sensor roll angle.

24. The intra-oral x-ray sensor of claim **18**, wherein the embedded orientation detection component is operably coupled to one or more acoustic transducers.

25. The intra-oral x-ray sensor of claim **1**, wherein the x-ray image component is operably coupled to one or more charge-coupled devices.

26. The intra-oral x-ray sensor of claim **1**, wherein the x-ray image component is operably coupled to one or more complementary metal-oxide-semiconductor sensors.

27. The intra-oral x-ray sensor of claim **1**, further comprising:

one or more active optic devices configured to generate an output indicative of an intra-oral x-ray sensor border position.

28. The intra-oral x-ray sensor of claim **1**, further comprising:

one or more passive optics devices configured to indicate an intra-oral x-ray sensor border position.

29. The intra-oral x-ray sensor of claim **1**, further comprising:

a beacon component configured to convey information associated with at least one of a sensor position or a sensor orientation.

30. The intra-oral x-ray sensor of claim **29**, wherein the beacon component is operably coupled to a transducer configured to generate an output indicative of an intra-oral x-ray sensor border position.

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