imaging said x-rays downstream of said sample using a composite objective lens comprising a plurality of micro-objectives, each of the micro-objectives being structured to block zero-order diffraction x-rays.

17. The method of claim **16** wherein said imaging step comprises imaging said x-ray light downstream of said sample using a substantially planar and generally hexagonal array of micro-objectives.

18. The method of claim **16** further comprising:

detecting two dimensional images based on said imaged x-rays from said objective lens system;

storing images detected in said image detector; and

constructing a three dimensional image from said two dimensional images.

19. A method of forming an image of a sample comprising the steps of:

providing x-rays;

collecting said x-rays and directing them in a desired fashion;

positioning the sample in the path of said rays;

imaging said x-rays downstream of said sample using a composite objective lens comprising a plurality of micro-objectives, each of the micro-objectives being structured to block zero-order diffraction x-rays; and

detecting and acquiring an image using said imaged x-rays.

20. The method of claim **19** wherein said positioning step further comprises transmitting the x-rays through the sample.

21. The method of claim **19** wherein said positioning step further comprises scattering the x-rays through the sample.

22. The method of claim **19** wherein said positioning step further comprises reflecting the x-rays off the sample.

23. The method of claim **19** wherein said focusing step comprises focusing said x-ray light downstream of said sample using a substantially planar and generally hexagonal array of micro-objectives.

24. The method of claim **19** wherein said step of detecting and acquiring an image comprises:

detecting two dimensional images based on said imaged x-rays from said objective lens system;

storing images detected in said image detector; and

constructing a three dimensional image from said two dimensional images.

25. The tomography imaging system of claim **1** further comprising an order sorting aperture disposed downstream of the composite objective lens assembly, the order sorting aperture being structured to block all but one of odd-order diffraction radiation imaged by each of the micro-objectives.

26. The tomography imaging system of claim **6** further comprising an order sorting aperture disposed between the composite objective lens system and the imager, the order sorting aperture being structured to block all but one of odd-order diffraction radiation imaged by each of the micro-objectives.

27. The method according to claim **16** further comprising the step of:

blocking all but one of odd-order diffraction radiation imaged by the micro-objectives.

28. The method according to claim **19** further comprising the step of:

blocking all but one of odd-order diffraction radiation imaged by the micro-objectives.

29. The tomography imaging system of claim **1** wherein each of the micro-objectives is structured to block odd-order diffraction radiation other than first-order diffraction radiation.

30. The tomography imaging system of claim **6** wherein each of the micro-objectives is structured to block odd-order diffraction radiation other than first-order diffraction radiation.

31. The method according to claim **16** further comprising the step of:

adapting each of the micro-objectives to block odd-order diffraction radiation other than first-order diffraction radiation.

32. The method according to claim **19** further comprising the step of:

adapting each of the micro-objectives to block odd-order diffraction radiation other than first-order diffraction radiation.

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