

Patents of Dr. Christian David

1. David, C., Stampanoni, M. ()
"Method for X-ray phase contrast and dark-field imaging using an arrangement of gratings in planar geometry"
(US9036773-B2; CA2803683-A1, CN102971620A, EP2585817-A1, US20140112440, WO2012000694-A1)
2. David, C., Solak, H. ()
"Method for generating a circular periodic structure on a basic support material"
(US7858268-B2; EP1593002-A2; EP1593002-B1; US20060098566; WO2004072737-A2; WO2004072737-A3)
3. Meents, A., Vartiainen, I., David, C. ()
"Sample holder for the examination of small samples contained in a suspension."
(US20160018343-A1; DE202014103041-U1)
4. David, C., Donath, T., Hempel, E., Hoheisel, M., Matthis, B., Pfeiffer, F. & Popescu, S. (),
"Method for manufacturing X-ray-optical lattice for X-ray dark field image and for X-ray phase contrast image, involves applying X-ray-sensitive layer with electrical conducting cover layer on base plate."
(DE102008049200-A1)
5. David, C., Donath, T., Hempel, E., Hoheisel, M., Pfeiffer, F. & Popescu, S. (),
"Arrangement for one of projective and tomographic phase-contrast imaging in differential phase-contrast computed tomography, scans examination object with different spatial orientations of grid lines of one-dimensional phase grid."
(US2010177864-A1; DE102009004702-A1)
6. David, C., Donath, T., Hempel, E., Hoheisel, M., Pfeiffer, F. & Popescu, S. (),
"X-ray computed tomography system for generating tomographic phase contrast and dark field exposure for patient, has grid structure, where distance between grid structure and phase grid is adjusted depending on fan angle."
(DE102008048688-A1; US2010080341-A1)
7. David, C. & Pfeiffer, F. (),
"X-ray interferometer for obtaining x-ray images from object, has evaluating unit evaluating intensities for each pixel in images to identify characteristic of object for each individual pixel as absorption dominated pixel."
(EP1879020-A1; WO2008006470-A1; EP2038641-A1; AU2007272030-A1; CN101495853-A; JP2009543080-W; US2009316857-A1; CA2657600-A1)
8. David, C., Weitkamp, T. & Pfeiffer, F. (),
"Interferometer for hard X-rays uses conventional X-ray source and two different grating structures for diffracting X-rays that passes through object to be investigated and delivering spatially modulated detection sensitivity."
(EP1731099-A1; WO2006131235-A1; EP1887936-A1; AU2006257026-A1; CN101257851-A; JP2008545981-W; US2009092227-A1; AU2006257026-B2)
9. Baumann, J., David, C., Engelhardt, M., Freudenberger, J., Hempel, E., Hoheisel, M., Honal, M., Mertelmeier, T., Pfeiffer, F., Popescu, S. & Schuster, M. (),
"Measurement system for noninvasive determination of properties of object, has phase contrast medium that comprises base liquid and multiple particles so that refractive index of base liquid

differs with refractive index of particles."

(US2009003526-A1; DE102007029730-A1; US7653177-B2)

10. Baumann, J., David, C., Engelhardt, M., Freudenberger, J., Hempel, E., Hoheisel, M., Mertelmeier, T., Pfeiffer, F., Popescu, S., Schuster, M., Darfitt, C., Engelhart, M. & Freudenberger, J. (),
"Focus-detector arrangement for X-ray apparatus for generating projective and tomographic phase contrast recordings of observed region, comprises phase grating, and analysis-detector system."
(US2007183563-A1; JP2007203065-A; CN101011257-A; US7433444-B2)
11. Baumann, J., David, C., Engelhardt, M., Freudenberger, J., Hempel, E., Hoheisel, M., Mertelmeier, T., Pfeiffer, F., Popescu, S., Schuster, M., Darfitt, C., Engelhart, M. & Freudenberger, J. (),
"X-ray optical transmission grating of X-ray apparatus for generating projective and/or tomographic phase contrast recordings of subject, has at least two sub-gratings arranged in direct succession in beam direction."
(US2007183579-A1; JP2007203066-A; CN101013613-A; US7639786-B2)
12. Baumann, J., David, C., Engelhardt, M., Freudenberger, J., Hempel, E., Hoheisel, M., Mertelmeier, T., Pfeiffer, F., Popescu, S., Schuster, M., Darfitt, C., Engelhart, M. & Freudenberger, J. (),
"Focus-detector arrangement of X-ray apparatus for generating projective and tomographic phase contrast recording of subject, includes phase grating comprising filler material."
(US2007183582-A1; JP2007203064-A; CN101011253-A; US7564941-B2)
13. Baumann, J., David, C., Engelhardt, M., Freudenberger, J., Hempel, E., Hoheisel, M., Mertelmeier, T., Pfeiffer, F., Popescu, S., Schuster, M., Darfitt, C., Engelhart, M. & Freudenberger, J. (),
"Focus-detector arrangement of X-ray apparatus for generating projective and tomographic phase contrast recording of subject, includes X-ray optical grating comprising bars which are free from overhangs forming shadows in beam path of rays."
(US2007183583-A1; JP2007206075-A; CN101011250-A; US7486770-B2)
14. Baumann, J., Schuster, M., Freudenberger, J., Hempel, E., Hoheisel, M., Mertelmeier, T., Popescu, S., Engelhardt, M., David, C., Pfeiffer, F., Schardt, P., Schillinger, B., Heismann, B., Engelhart, M. & Freudenberger, J. (),
"Focus-detector system on X-ray equipment for generating projective or tomographic X-ray phase-contrast exposures of an object under examination uses an anode with areas arranged in strips."
(DE102006015355-A; DE102006015356-A; DE102006015358-A; DE102006017290-A;
DE102006017291-A; EP1803398-A1; DE102005062447-A1; DE102005062448-A1; WO2007074029-A1; US2007153979-A1; DE102006037254-A1; DE102006037255-A1; DE102006037256-A1;
DE102006037257-A1; DE102006015356-A1; DE102006037281-A1; DE102006015358-A1;
DE102006017291-A1; DE102006017290-A1; DE102006037282-A1; DE102006015355-A1;
WO2007087789-A1; US2007189449-A1; JP2007206076-A; CN101011256-A; US7440542-B2;
DE112007000806-A5; US2009154640-A1; JP2009525084-W; EP1803398-B1)
15. Popescu, S., Heismann, B., Hempel, E., David, C., Pfeiffer, F. & Darfitt, C. (),
"Focus/detector system of an X-ray apparatus for generating phase contrast recordings, comprises a beam source to generate a field of ray-wise coherent X-rays, and a grating/detector arrangement to generate an interference pattern."
(US2007183580-A1; JP2007203062-A; CN101011254-A; US7492871-B2)