

Albert Redo-Sanchez, PhD

Scholar	http://scholar.google.com/citations?user=hLNrZikAAAAJ	Email	albert@redo-sanchez.net
Linked-In	http://www.linkedin.com/in/redosanchez	Phone	+1 845.390.8689
TEDx talk	Unlimited vision, https://youtu.be/Nu-IoNHGxF8		+34 659.201.086
Harvard	Sightlines: obSERVE, https://youtu.be/AUwTFaU0sqU		
Website	https://redo-sanchez.net		

Publications

1. Melios, C., Nathaniel, H., Callegaro, L., Centeno, A., Cultrera, A., Cordon, A., Panchal, V., Arnedo, I., Redo-Sanchez, A., Etayo, D., Fernandez, M., Lopez, A., Rozhko, S., Txoperena, O., Zurutuza, A., & Kazakova, O. (2020) Towards standardisation of contact and contactless electrical measurements of CVD graphene at the macro-, micro- and nano-scale. *Scientific Reports*, 10(1). DOI:10.1038/s41598-020-59851-1
2. Cordon, A., Miranda, L., Martinez, C., Ines, A., Etayo, D., Fernandez, M., Rodriguez, P., Taboada, E., Redo-Sanchez, A., Castrillo, M., Laso, M., & Arnedo, I. (2019) THz to inspect graphene and thin films materials. *IRMMW-THz*. DOI:10.1109/IRMMW-THz.2019.8874447
3. Callegaro, L., Cassiago, C., Cultrera, A., D'Elia, V., Serazio, D., Ortolano, M., Kazakova, O., Melios, C., Raso, F., Matias, L., Zurutuza, A., Centeno, A., Redo-Sanchez, A., Kretinin, K., Fabricius, A., Weking, G., Bergholz, W., & Fabricius, N. (2018) GRACE: developing electrical characterisation methods for future graphene electronics. *Conference on Precision Electromagnetic Measurements*. DOI:10.1109/CPEM.2018.8501012
4. Mackenzie, D. M., Whelan, P. R., Bøggild, P., Uhd Jepsen, P., Redo-Sanchez, A., Etayo, D., Fabricius, N., & Petersen, D. H. (2018) Quality assessment of terahertz time-domain spectroscopy transmission and reflection modes for graphene conductivity mapping. *Optics Express*, 26(7), 9220-9229. DOI:10.1364/OE.26.009220
5. Heshmat, B., Gordon-Moseley, A., Naranjo-Montoya, O. A., Castro-Camus, E., Ciceri, D., Redo-Sanchez, A., Allanore, A., Kmetz, A. A., Eichmann, S. L., Poitzsch, M. E., & Raskar, R. (2017) Terahertz scattering and water absorption for porosimetry. *Optics Express*, 25(22), 27370-27385. DOI:10.1364/OE.25.027370
6. Redo-Sanchez, A., Heshmat, B., Aghasi, A., Naqvi, S., Zhang, M., Romberg, J., & Raskar, R. (2016). Terahertz time-gated spectral imaging for content extraction through layered structures. *Nature Communications*, 7, 12665. DOI:10.1038/ncomms12665
7. Satat, G., Heshmat, B., Naik, N., Redo-Sanchez, A., & Raskar, R. (2016). Advances in ultrafast optics and imaging applications. *Ultrafast Bandgap Photonics*. SPIE. DOI:10.1117/12.2222438
8. Rachapudi, P., Sinha, S., Redo-Sanchez, A., & Raskar, R. (2016). A purely solid-state device for rapid reconstruction of 3D models of the anterior segment of the eye with no moving parts. *Investigative Ophthalmology & Visual Science*, 57(12), 1908.
9. Aghasi, A., Heshmat, B., Redo-Sanchez, A., Romberg, J., & Raskar, R. (2016). Sweep distortion removal from terahertz images via blind demodulation. *Optica*, 3(7), 754. DOI:10.1364/optica.3.000754
10. Satat, G., Heshmat, B., Naik, N., Redo-Sanchez, A., & Raskar, R. (2016). Advances in ultrafast optics and imaging applications. *Proceedings of the SPIE*, 9835, 98350Q. DOI:10.1117/12.2222438
11. Lopez-Dominguez, V., Boix-Montanes, A., Redo-Sanchez, A., & Tejada-Palacios, J. (2016). Terahertz time-domain techniques. *Journal of Pharmacy and Pharmacology*, 68(7), 873. DOI:10.1111/jphp.12553
12. Redo-Sanchez, A., Laman, N., Schuklin, B., & Tongue, T. (2014). Non-destructive imaging with compact and portable terahertz systems. In *AIP Conference Proceedings* (Vol. 1581, pp. 1583-1587)
13. Redo-Sanchez, A., Laman, N., Schuklin, B., & Tongue, T. (4673). Compact, portable Terahertz systems for on-site inspection applications. In *38th International Conference on Infrared, Millimeter, and Terahertz Waves*. IEEE. DOI:10.1109/irmmw-thz.2013.6665510
14. Seco-Martorell, C., Lopez-Dominguez, V., Arauz-Garofalo, G., Redo-Sanchez, A., Palacios, J., & Tejada, J. (2013). Goya artwork imaging with Terahertz waves. *Optics Express*, 21(15), 17800. DOI: 10.1364/oe.21.017800
15. Redo-Sanchez, A., Laman, N., Schuklin, B., & Tongue, T. (2013). Review of Terahertz Technology Readiness Assessment and Applications. *Journal of Infrared, Millimeter, and Terahertz Waves*, 34(9), 500. DOI:10.1007/s10762-013-9998-y

16. Riley, M., Redo-Sanchez, A., Karampourniotis, P., Plawsky, J., & Lu, T.-M. (2012). Nanostructured porous silicon films for terahertz optics. *Nanotechnology*, 23(32), 325301. DOI:10.1088/0957-4484/23/32/325301
17. Zhang, X.-C., & Redo-Sanchez, A. (2012). Handheld THz Instrumentation. *SPIE Professional*. DOI: 10.1117/2.4201204.09
18. Zhang, J., Zhang, X.-C., & Redo-Sanchez, A. (2012). THz Polarization-Dependent Imaging of Nuclear Graphite. In *Frontiers in Optics*
19. Redo-Sanchez, A., & Zhang, X.-C. (2011). Self-referenced method for terahertz wave time-domain spectroscopy. *Optics Letters*, 36(17), 3308. DOI:10.1364/ol.36.003308
20. Redo-Sanchez, A., Salvatella, G., Galceran, R., Roldos, E., Garcia-Reguero, J.-A., Castellari, M., & Tejada, J. (2011). Assessment of terahertz spectroscopy to detect antibiotic residues in food and feed matrices. *The Analyst*, 136(8), 1733. DOI:10.1039/c0an01016b
21. Song, Q., Zhao, Y., Redo-Sanchez, A., Zhang, C., & Liu, X. (2009). Fast continuous terahertz wave imaging system for security. *Optics Communications*, 282(10), 2019. DOI:10.1016/j.optcom.2009.02.019
22. Redo-Sanchez, A., Kaur, G., Zhang, X.-C., Buersgens, F., & Kersting, R. (2009). 2-D Acoustic Phase Imaging With Millimeter-Wave Radiation. *IEEE Transactions on Microwave Theory and Techniques*, 57(3), 589. DOI:10.1109/tmtt.2009.2013306
23. Song, Q., Redo-Sanchez, A., Zhao, Y., & Zhang, C. (2008). High speed imaging with CW THz for security. *International Conference on Optical Instruments and Technology: Optoelectronic Measurement Technology and Applications*. SPIE. DOI:10.1117/12.807197
24. Redo-Sanchez, A., & Zhang, X.-C. (2008). Terahertz Science and Technology Trends. *IEEE Journal of Selected Topics in Quantum Electronics*, 14(2), 260. DOI:10.1109/jstqe.2007.913959
25. Zhong, H., Redo-Sanchez, A., & Zhang, X.-C. (2007). Standoff Sensing and Imaging of Explosive Related Chemical and Bio-Chemical Materials Using THz-TDS. *International Journal of High Speed Electronics and Systems*, 17(2), 239. DOI:10.1142/s0129156407004461
26. Zeng, G., Zhang, X.-C., Redo-Sanchez, A., & Embrechts, M. J. (2007). Independent Component Analysis for Separating Water Vapor Spectrum from Terahertz Spectra. In *Intelligent Engineering Systems Through Artificial Neural Networks* (Vol. 17)
27. Zhong, H., Karpowicz, N., Redo-Sanchez, A., Li, X., Wang, S. H., Ferguson, B., & Zhang, X.-C. (2006). Terahertz Wave Imaging Technology. In *4th World Congress on Industrial Process Tomography*
28. Zhong, H., Redo-Sanchez, A., & Zhang, X.-C. (2006). Identification and classification of chemicals using terahertz reflective spectroscopic focal-plane imaging system. *Optics Express*, 14(20), 9130. DOI: 10.1364/oe.14.009130
29. Redo-Sanchez, A., Karpowicz, N., Xu, J., & Zhang, X.-C. (2006). Damage and defect inspection with terahertz waves. In *The 4th International Workshop on Ultrasonic and Advanced Methods for Nondestructive Testing and Material Characterization*
30. Redo-Sanchez, A., Tejada, J., & Bohigas, X. (2006). Bubble Detector in Polyurethane Applications Based on a Microwave System. *IEEE Sensors Journal*, 6(4), 939. DOI:10.1109/jsen.2006.877999
31. Zhong, H., Redo-Sanchez, A., Chen, Y., & Zhang, X.-C. (2006). THz wave standoff detection of explosive materials. In *Terahertz for Military and Security Applications IV* (Vol. 6212)
32. Redo-Sanchez, A., Karpowicz, N., & Zhang, X.-C. (2006). Sensing and Imaging with Continuous-Wave Terahertz Systems. In *AIP Conference Proceedings* (Vol. 820, 508)
33. Zeng, G., Embrechts, M., Redo-Sanchez, A., Han, L., & Zhang, X.-C. (2006). Independent component analysis for materials identification from terahertz spectra. In *Intelligent Engineering Systems through Artificial Neural Networks* (Vol. 16)
34. Zhong, H., Redo-Sanchez, A., & Zhang, X.-C. (2005). Standoff distance detection of explosive materials with THz waves. In *THz Technology, Ultrafast Measurements, and Imaging*. IEEE
35. Liu, H., Zhong, H., Karpowicz, N., Li, X., Redo-Sanchez, A., Chen, Y., Jin, Y.-S. (2005). THz photonics technology and its applications. In *International Topical Meeting on Microwave Photonics* (pp. 15-18)
36. Karpowicz, N., Redo-Sanchez, A., Zhong, H., Li, X., Xu, J., & Zhang, X.-C. (2005). Continuous-wave terahertz imaging for non-destructive testing applications. In *The Joint 30th International Conference on Infrared and Millimeter Waves and 13th International Conference on Terahertz Electronics* (Vol. 1, pp. 329-330)
37. Ruiz, X., Ramirez-Piscina, L., Redo-Sanchez, A., & Casademunt, J. (2001). Nonlinear Response of Fluid Flow to G-Jitter in Differentially Heated Cavities. Subharmonic Route to Chaos and Beyond. *European Space Agency*

Patents

1. US 10105049, *Methods and apparatus for anterior segment ocular imaging*
2. US 10386650, *Methods and apparatus for high resolution imaging with reflectors at staggered depths beneath sample*
3. US 16/059144, *Methods and apparatus for imaging of layers*
4. US 62543375, *Batch scanning using time-of-flight*
5. US 62411586, *Methods and apparatus for remote sub-wavelength imaging*
6. US 61/571169, *Self-referenced high-resolution method for Terahertz wave spectroscopy*
7. WO2004/106149, *Palpation system for insertion of windows in vehicles*
8. WO2004/011918, *Microwave system for detecting bubble*
9. WO2002/094693, *Machine for transporting and stacking magnetic and non-magnetic sheets*
10. US 6746063, *Device for separating, lifting and transporting sheets of aluminum or other non-ferromagnetic material*

Invited talks

1. Onyx 2D materials inspector. *Graphene Conference*, Barcelona, Large-scale manufacturing graphene and talk in Barcelona, March 30th 2017
2. Terahertz in art and cultural heritage inspection: present and future. *Eastern Analytical Symposium*, Somerset NJ, Nov. 16th 2015
3. Cultural heritage inspection applications with terahertz waves based on reading a closed book. *Primera Reunion Mexicana de Ciencia y Tecnologia de Terahertz*, Leon, Guanajuato, Mexico, Oct. 2015
4. Portable open-field terahertz instrumentation. *Pittcon conference*, Philadelphia PA, United States, Mar. 2013
5. Terahertz spectroscopy short course. *EPFL*, Lausanne, Switzerland, Feb. 2013
6. Terahertz instrumentation status and market outlook. *2012 Workshop on terahertz science instruments and frontier technology*, Beijing, China, Aug. 2012
7. Zomega terahertz corporation overview. *RFIC panel sessions*, Montreal, Canada, June 2012
8. Frontiers of terahertz time-domain imaging. *Arizona State University*, Tempe AZ, United States, Jan. 2012
9. Practical guide to develop terahertz systems. *Universitat Politecnica de Catalunya*, Barcelona, Spain, June 2010
10. THz time-domain spectroscopy for food and pharmaceutical applications. *Universitat de Barcelona*, Barcelona, Spain, Jan. 2010
11. Terahertz science and technology review. *Universidad Politecnica de Madrid*, Madrid, Spain, July 2009
12. Terahertz science and technology review. *Universitat Politecnica de Catalunya*, Barcelona, Spain, May 2009
13. Terahertz systems integration constraints. *Universitat Politecnica de Catalunya*, Barcelona, Spain, May 2009
14. Terahertz science and technology for security applications. *Upstate New York electronic crimes coalition conference*, Troy NY, United States, Nov. 2007
15. Sensing explosive and related compounds with terahertz technology: from laboratory demonstration to open field applications. *Gordon Research Conference*, Big Sky MT, United States, Sept. 2007
16. Damage and defect inspection with terahertz waves. *University at Dartmouth*, Dartmouth MA, United States, June 2006
17. Continuous-wave terahertz systems. *Capital Normal University*, Beijing, China, Mar. 2006
18. Sensing and imaging with CW terahertz systems. *Quantitative Non-Destructive Evaluation Conference*, Brunswick ME, United States, July 2005
19. Sensing and imaging with continuous-wave terahertz. *Rensselaer Polytechnic Institute*, Troy NY, United States, Oct. 2005
20. Terahertz applications in solid state physics. *University of Barcelona*, Barcelona, Spain, Sept. 2005