CURRICULUM VITAE
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Education

2021. 09 **Ph.D.**, Atmospheric and Oceanic Sciences, University of California Los Angeles, USA
2017. 06 **M.S.**, Atmospheric and Oceanic Sciences, University of California Los Angeles, USA
2015. 06 **B.S.**, Atmospheric Science, Sun Yat-Sen University, China

Professional Experience

2021. 10-present **Postdoctoral Research Scholar**, NASA GISS and Columbia University

Awards and Fellowships

2021 Earth Institute Postdoctoral Research Fellowship, Columbia University (**2021-2023 Fellow**)
2021 Outstanding Student Presentation Award, American Meteorological Society
2019 Future Investigators in NASA Earth and Space Science and Technology (FINESST) Fellowship, NASA (**2019-2021 Fellow**)
2019 UCLA Doctoral Student Travel Grant, UCLA
2016 Atmospheric and Oceanic Sciences Departmental Fellowship, UCLA
2016 Dorothy Radcliffe Dee Fellowship, UCLA
2015 Palevsky Fellowship, UCLA
2014 First Prize Scholarship, Sun Yat-Sen University
2013 National Scholarship, Sun Yat-Sen University
2013 First Prize Scholarship, Sun Yat-Sen University
2012 National Scholarship, Sun Yat-Sen University
2012 First Prize Scholarship, Sun Yat-Sen University

Publications

In preparation

13. **Huang Y.**, J. F. Kok, and O. Muñoz, Single-scattering properties of ellipsoidal dust accounting for realistic shape distribution.

12. Adebiyi A. A., J. F. Kok, …, **Y. Huang**, …, A review of coarse desert dust in the Earth system, *Aeolian Research (invited review)*.

11. Adebiyi A. A., **Y. Huang**, B. H. Samset, and J. F. Kok, Climate models and remote-sensing retrievals overestimate the absorption of solar radiation by North Africa dust.

Under review

10. Meng J., **Y. Huang**, D. M. Leung, L. Li, A. A. Adebiyi, C. L. Ryder, N. M. Mahowald, and J. F. Kok, Parameterization for the emission of super coarse desert dust. submitted to *Geophysical Research Letters*.

9. Formenti P., C. Di Biagio, **Y. Huang**, J. F. Kok, M. D. Mallet, D. Boulanger, and M. Cazaunau, Look-up tables resolved by complex refractive index to correct particle sizes measured by common research-

grade optical particle counters, submitted to *Atmospheric Measurement Techniques*.

Published

8. Ito A., A. Adebiyi, **Y. Huang**, and J. F. Kok (2021), Less atmospheric radiative heating by dust due to the synergy of coarser size and aspherical shape, *Atmospheric Chemistry and Physics*, 21(22), 16869–16891, doi: 10.5194/acp-21-16869-2021.

7. Klose M., Jorba O., Gonçalves Ageitos M., Escribano J., Dawson M. L., Obiso V., Di Tomaso E., Basart S., Montané Pinto G., Macchia F., Ginoux P., Guerschman J., Prigent C., **Huang Y.**, Kok J. F., Miller R. L., and Pérez García-Pando C. (2021), Mineral dust cycle in the Multiscale Online Nonhydrostatic AtmospheRe CHemistry model (MONARCH) Version 2.0, *Geoscientific Model Development*, 14(10), 6403–6444, doi: 10.5194/gmd-14-6403-2021.

6. Kok J. F., Adebiyi A. A., Albani S., Balkanski Y., Checa-Garcia R., Chin M., Colarco P. R., Hamilton D. S., **Huang Y.**, Ito A., Klose M., Li L., Mahowald N. M., Miller R. L., Obiso V., Pérez García-Pando C., Rocha-Lima A., and Wan J. S. (2021), Contribution of the world's main dust source regions to the global cycle of desert dust, *Atmospheric Chemistry and Physics*, 21(10), 8169–8193, doi: 10.5194/acp-21-8169-2021.

5. Kok J. F., Adebiyi A. A., Albani S., Balkanski Y., Checa-Garcia R., Chin M., Colarco P. R., Hamilton D. S., **Huang Y.**, Ito A., Klose M., Leung D. M., Li L., Mahowald N. M., Miller R. L., Obiso V., Pérez García-Pando C., Rocha-Lima A., Wan J. S., and Whicker C. A. (2021), Improved representation of the global dust cycle using observational constraints on dust properties and abundance, *Atmospheric Chemistry and Physics*, 21(10), 8127–8167, doi: 10.5194/acp-21-8127-2021.

4. **Huang Y.**, A. A. Adebiyi, P. Formenti, and J. F. Kok (2021), Linking the different diameter types of aspherical desert dust indicates that models underestimate coarse dust emission, *Geophysical Research Letters*, 48(6), doi: 10.1029/2020GL092054.

3. Swet N., J. F. Kok, **Y. Huang**, H. Yizhaq and I. Katra (2020), Low dust generation potential from active sand grains by wind abrasion, *Journal of Geophysical Research – Earth Surface*, 125(7), doi:10.1029/2020JF005545.

2. **Huang Y.**, J. F. Kok, K. Kandler, H. Lindqvist, T. Nousiainen, S. Tetsu, A. A. Adebiyi, and O. Jokinen (2020), Climate models and remote sensing retrievals neglect substantial desert dust asphericity, *Geophysical Research Letters*, 47(6), doi:10.1029/2019GL086592.

1. **Huang Y.**, J. F. Kok, R. L. Martin, N. Swet, I. Katra, T. E. Gill, R. L. Reynolds, and L. S. Freire (2019), Fine dust emissions from active sands at coastal Oceano Dunes, California, *Atmospheric Chemistry and Physics*, 19(5), doi:10.5194/acp-19-2947-2019.

Doctoral thesis

Huang Y. (2021), Observational constraints on dust size and shape: implications for global aerosol models and remote sensing retrievals, *Ph.D. Dissertation, University of California Los Angeles*.

Conference Presentations

Yue Huang, Jasper F. Kok, Adeyemi Adebiyi, and Paola Formenti: Linking the different diameter types of aspherical desert dust indicates that models underestimate coarse dust emission, *American Meteorological Society 2021 Annual Meeting* – Oral presentation.

- **Selected for the Outstanding Student Presentation Award**

Yue Huang, Jasper F. Kok, Adeyemi Adebiyi, and Paola Formenti: Linking the different diameter types of aspherical desert dust indicates that models underestimate coarse dust emission, *American Geophysical Union 2020 Fall Conference* – Poster presentation.

Yue Huang, Jasper F. Kok, Konrad Kandler, Hannakaisa Lindqvist, Timo Nousiainen, Tetsu Sakai, Adeyemi Adebiyi, and Olli Jokinen: Climate models and remote sensing retrievals underestimate desert dust asphericity, *American Geophysical Union 2019 Fall Conference* – Oral presentation.

Yue Huang and Jasper F. Kok: Dust asphericity causes Optical Particle Counters to underestimate dust size, *American Geophysical Union 2018 Fall Conference* – Poster presentation.

Yue Huang, Jasper F. Kok, Raleigh L. Martin, Nitzan Swet, Itzhak Katra, Thomas E. Gill, Richard L. Reynolds, and Livia S. Freire: Fine dust emissions from coastal Oceano Sand Dunes: the importance of clay-coating removal and aeolian abrasion of feldspar, *International Conference on Aeolian Research (ICAR) 2018* – Poster presentation.

Yue Huang, Jasper F. Kok, Raleigh L. Martin, Livia S. Freire, Francis A. Turney, and Marcelo Chamecki, M.: Field measurements of dust emission from sand dunes, *American Geophysical Union 2016 Fall Conference* – Poster presentation.

Supervised Undergraduate Students

- *Alana Dodero*, AOS/Math major, UCLA, Spring 2019 – Fall 2020. Project title: Correcting measurements of desert dust particle size to better determine their effects on Earth's radiation budget.
    - **Received 2020 JPL-UCLA JIFRESSE Summer Internship**
- *Yingxiao Zhang*, Summer undergraduate researcher from Nanjing University, Summer 2018. Project title: Validation of the single-scattering properties of tri-axial ellipsoidal dust against laboratory measurements. Now Ph. D. student at University of Michigan.
- *Yuheng Zhang*, Summer undergraduate researcher from University of Science and Technology of China, Summer 2018. Project title: Correcting dust particle size distributions measured by Optical Particle Counters accounting for dust asphericity. Now Ph. D. student at Texas A&M University.

Teaching Experiences

Fall 2018: Teaching Assistant – Fundamentals of Atmospheric Dynamics and Thermodynamics (AOS 101), UCLA

Summer 2018: Instructor – Paper discussion on dust aerosols for starting undergraduate researchers, UCLA

Winter 2018: Teaching Assistant – Climate Change and Climate Modeling (AOS 102), UCLA

Fall 2016: Teaching Assistant – Introduction to the Atmospheric Environment (AOS 3), UCLA

Professional and Community Services

Members: American Geophysical Union, European Geosciences Union, and Institute of Electrical and Electronics Engineers

Journal Reviewer: Geophysical Research Letters, Journal of Geophysical Research, Atmospheric Chemistry and Physics, and Aeolian Research