Stanford



Albert Sean Chiou, MD, MBA

Clinical Professor, Dermatology

CLINICAL OFFICE (PRIMARY)

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Dr. Albert Chiou is a Clinical Professor of Dermatology. He earned his Bachelor of Science from Stanford University and completed an MPhil in Chemistry, by research, from the University of Cambridge, where he was a Gates Cambridge Scholar. He received his medical degree from Harvard Medical School, where he also completed a joint business degree. Dr. Chiou performed his dermatology residency at Stanford University and served as Chief Resident in his final year. His clinical focus is in medical dermatology.

Dr. Chiou conducts clinical trials investigating new therapies for inflammatory and genetic skin diseases like atopic dermatitis and epidermolysis bullosa, along with evaluating artificial intelligence-driven decision support approaches for skin cancer and melanoma detection. He is an NIH-funded investigator and is active in supporting institutional research informatics efforts pertinent to clinical research and clinical trials across Stanford Medicine.

CLINICAL FOCUS

- Dermatology
- Acne
- Atopic Dermatitis
- Skin Cancer
- Dermatologic Surgery
- Psoriasis

ACADEMIC APPOINTMENTS

- Clinical Professor, Dermatology
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Medical Informatics Director for Clinical Research, Stanford Healthcare, (2026- present)
- Director of Clinical Research, Stanford Department of Dermatology, (2024- present)
- Faculty Champion for Clinical Research Transformation, Stanford Medicine, (2023-2026)
- Director of Value Based Care, Stanford Department of Dermatology, (2021-2024)
- Director, Stanford Skin Innovation and Interventional Research Group (SIIRG), Stanford Department of Dermatology, (2019- present)

HONORS AND AWARDS

- Medical Dermatology Career Development Award, Dermatology Foundation (2019 - 2021)
- Gates Cambridge Scholarship, Gates Cambridge Trust (2007 - 2008)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Augmented Intelligence Committee, American Academy of Dermatology (2023 - present)
- Member, American Academy of Dermatology (2017 - present)

PROFESSIONAL EDUCATION

- Board Certification: Dermatology, American Board of Dermatology (2017)
- Chief Resident, Stanford Hospital and Clinics (2017)
- Residency: Stanford University Dermatology Residency (2017) CA
- Internship: Santa Clara Valley Medical Center Dept of Medicine (2014) CA
- MD, MBA, Harvard Medical School (2013)
- MPhil, University of Cambridge , Chemistry, by Research (2008)
- BS, Stanford University , Chemistry (2007)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am a clinical researcher interested in evaluating promising new diagnostic paradigms and treatments for serious or poorly treated, chronic skin conditions. My research currently includes:

Therapeutics:

- Treatments for atopic dermatitis and other inflammatory skin conditions

- Treatments for itch from epidermolysis bullosa

- Treatments for chronic wounds for patients with recessive dystrophic epidermolysis bullosa (In collaboration with Dr. Jean Tang and Dr. Peter Marinkovich)

Diagnostics:

- Artificial intelligence approaches for melanoma and skin cancer early detection

- Imaging mass spectrometry for skin cancer margin analysis and diagnosis

I collaborate with other faculty within the Stanford Skin Innovation and Interventional Research Group (SIIRG) to conduct investigator initiated and sponsored clinical trials seeking to improve care for important dermatologic diseases

Please learn more about our work at: https://siirg.stanford.edu/

CLINICAL TRIALS

- Safety, Tolerability, and Preliminary Efficacy of Soquelitinib in Participants With Moderate to Severe AD, Recruiting
- A Neurokinin-1 Receptor Antagonist for the Treatment of Pruritus in Patients With Epidermolysis Bullosa, Not Recruiting
- A Study to Evaluate Upadacitinib in Combination With Topical Corticosteroids in Adolescent and Adult Participants With Moderate to Severe Atopic Dermatitis, Not Recruiting
- Evaluation of Upadacitinib in Adolescent and Adult Patients With Moderate to Severe Atopic Dermatitis (Eczema), Not Recruiting
- Neurokinin-1 Receptor Antagonist for the Treatment of Itch in EB Patients, Not Recruiting
- SAR231893-LPS15497- "Dupilumab Effect on Sleep in AD Patients", Not Recruiting
- Study of Patidegib Topical Gel, 2%, for the Reduction of Disease Burden of Persistently Developing Basal Cell Carcinomas (BCCs) in Subjects With Basal Cell Nevus Syndrome (Gorlin Syndrome), Not Recruiting
- Study to Evaluate Adverse Events and Change in Disease Activity With Oral Tablets of Upadacitinib in Adult Participants With Non-Segmental Vitiligo, Not Recruiting
- 12-week Study of NFX-179 Gel in Subjects With Epidermal Nevi, Not Specified

Publications

PUBLICATIONS

- **Development and Validation of a Scale to Assess Epidermolysis Bullosa Simplex Severity.** *JAMA dermatology*
  Johnson, A. N., Pathmarajah, P., Eid, E., Admani, S., Bauer, J. W., Bayliss, S. J., Gorell, E. S., Lara-Corrales, I., Paller, A. S., Reimer-Taschenbrecker, A., Chiou, A. S., Teng, J. M.
  2025
- **Multimodal Image Dataset for AI-Based Skin Cancer (MIDAS) Benchmarking** *New England Journal of Medicine AI*
  Chiou, A. S., Omiye, J. A., Gui, H., Ko, J. M., Gastman, B., Arbesman, J., Kai, Z. R., Gevaert, O., Sadee, C., Rotemberg, V. M., Han, S. S., Tschandl, P., Dickman, et al
  2025; 2 (6)
- **Single-Lesion Skin Cancer Risk Stratification Triage Pathway.** *JAMA dermatology*
  Chen, Y., Gui, H., Yao, H., Adu-Brimpong, J., Javitz, S., Golovko, V., Ko, J., Daneshjou, R., Chiou, A. S.
  2024
- **Health Care Professionals' Perceptions of AI in Clinical Practice: Productivity, Enjoyment, and Pay.** *JMIR formative research*
  Chen, M. L., Kim, J., Posada, M. R., Entwistle, D., de Vere Hunt, I., Li, Y., Li, X., Fast, N. J., Rodriquez, F., Chiou, A., Ashley, E., Linos, E.
  2026; 10: e90100
- **Validation of the Investigator's Global Assessment Scale for Epidermolysis Bullosa Simplex** *JEADV CLINICAL PRACTICE*
  Pathmarajah, P., Li, S., Mathur, M. B., Teng, J. M. C., Marinkovich, M., Johnson, A. N., Admani, S., Eid, E., Tu, J., Mitchell, D. C., Perrone, L., Gaona, R., Tang, et al
  2026
- **Patient-reported Itch Outcome Measures for Chronic Pruritus in Dystrophic Epidermolysis Bullosa: Exploratory Analysis of a Phase 2 Randomized Controlled Trial.** *Acta dermato-venereologica*
  Okata-Karigane, U., Gorell, E. S., Pathmarajah, P., Li, S., Chiou, A. S.
  2026; 106

- **Holistic evaluation of large language models for medical tasks with MedHELM.** *Nature medicine*
  Bedi, S., Cui, H., Fuentes, M., Unell, A., Wornow, M., Banda, J. M., Kotecha, N., Keyes, T., Mai, Y., Oez, M., Qiu, H., Jain, S., Schettini, et al
  2026
- **Validated, Reliable, and Novel Skin Frailty Scale for Outpatient Usage and Its Association With Age, Sex, and Non-melanoma Skin Cancer: An Observational Study** *JEADV Clinical Practice*
  Ho, P., Abou-Taleb, F., Li, S., Khalili, K., Murali, V., Pathmarajah, P., Longo, S., Rahman, Z., Chiou, A., Chang, A. S.
  2026
- **Prademagene zamikeracel for recessive dystrophic epidermolysis bullosa wounds (VIITAL): a two-centre, randomised, open-label, intrapatient-controlled phase 3 trial.** *Lancet (London, England)*
  Tang, J. Y., Marinkovich, M. P., Wiss, K., McCarthy, D., Truesdale, A., Chiou, A. S., Eid, E., McIntyre, J. K., Bailey, I., Furukawa, L. K., Gorell, E. S., Harris, N., Khosla, et al
  2025
- **11-year Safety Profile of Pz-cel, an Autologous Cell-based Gene Therapy in Recessive Dystrophic Epidermolysis Bullosa**
  Gorell, E., Gaona, R., Marinkovich, M., Chiou, A., Wiss, K., Eid, E., Reusch, D., Truesdale, A., Abdelwahab, S., Tang, J.
  ELSEVIER SCIENCE INC.2025: e30
- **Atopic Dermatitis Prevalence among Asian American and Pacific Islander Children: A Retrospective Study in a Northern California Healthcare System.** *Journal of the American Academy of Dermatology*
  Dahabreh, D., Lo, J. C., Chandra, M., Chiou, A. S., McCleskey, P. E., Darbinian, J. A., Ko, J., Arroyo, A. C.
  2025
- **Evaluating the appropriateness of skin cancer prevention recommendations obtained from an online chat-based artificial intelligence model** *JAAD INTERNATIONAL*
  Cai, E. M., Pathmarajah, P., Daneshjou, R., Ko, J. M., Chiou, A. S.
  2025; 18: 145-147
- **DDI-2: A Diverse Skin Condition Image Dataset Representing Self-Identified Asian Patients.** *The Journal of investigative dermatology*
  Chang, C. T., Pathmarajah, P., Allerup, J., Jafry, S., Yekrang, K., Mitchell, D. C., See, N. A., Perrone, L. A., Fong, B., Cisneros, M. D., Daneshjou, R., Ko, J., Chiou, et al
  2024
- **Improved sleep parallels improvements in atopic dermatitis signs, symptoms, and quality of life in adult patients treated with dupilumab: 24-week results from the DUPISTAD study.** *Journal of the American Academy of Dermatology*
  Merola, J. F., Chiou, A. S., During, E., Foley, P., Wu, J., Ardeleanu, M., Ozturk, Z. E.
  2024
- **Evaluation of antipruritic effects of serlopitant, a neurokinin 1 receptor antagonist, in patients with epidermolysis bullosa: A phase 2 randomized controlled trial.** *Journal of the European Academy of Dermatology and Venereology : JEADV*
  Okata-Karigane, U., Pathmarajah, P., Gorell, E. S., Sum, K., Yekrang, K., Phung, M., Barriga, M., Udrizar, P., Bailey, I., Li, S., Lu, Y., Tang, J. Y., Chiou, et al
  2024
- **Parental E-Cigarette Use and Pediatric Atopic Dermatitis.** *JAMA dermatology*
  Youn, G. M., Sarin, K. Y., Chiou, A. S., Chen, J. K., Honari, G.
  2024
- **Adult-onset inflammatory linear verrucous epidermal nevus successfully treated with intralesional steroid.** *JAAD case reports*
  Johnson, A. N., Sum, K., Rieger, K. E., Chiou, A. S., Li, D. J.
  2024; 46: 5-7
- **Noninvasive Detection of Skin Cancer by Imprint Desorption Electrospray Ionization Mass Spectrometry Imaging.** *Analytical chemistry*
  Meng, Y., Chiou, A. S., Aasi, S. Z., See, N. A., Song, X., Zare, R. N.
  2023
- **Association between yearlong air pollution and moderate-severe atopic dermatitis: A United States cross-sectional claims analysis.** *JAAD international*
  Trinh, P., Allerup, J. A., Li, S., Ko, J., Chen, J., Linos, E., Chiou, A. S.
  2023; 13: 4-6

- **Development of a digital tool for home-based monitoring of skin disease for older adults.** *Skin health and disease*
  van Egmond, S., Cai, Z. R., Nava, V., Joy de Vere Hunt, I., Rapaport, B. R., Ko, J., Chiou, A. S., Sarin, K., Tang, J., Zhang, L., Linos, E.
  2023; 3 (5): e235
- **Dupilumab significantly improves sleep in adults with atopic dermatitis: results from the 12-week placebo-controlled period of the 24-week phase 4 randomized double-blinded placebo-controlled DUPISTAD study.** *The British journal of dermatology*
  Merola, J. F., Chiou, A. S., During, E., Costanzo, A., Foley, P., Alfalasi, A., Gogate, S., Pinter, A., Dodiuk-Gad, R., Simon, D., Tauber, M., Weller, R., Pereyra-Rodriguez, et al
  2023
- **Best Practices for Clinical Skin Image Acquisition in Translational Artificial Intelligence Research.** *The Journal of investigative dermatology*
  Phung, M., Muralidharan, V., Rotemberg, V., Novoa, R. A., Chiou, A. S., Sadée, C. Y., Rapaport, B., Yekrang, K., Bitz, J., Gevaert, O., Ko, J. M., Daneshjou, R.
  2023; 143 (7): 1127-1132
- **Development and Clinical Evaluation of an Artificial Intelligence Support Tool for Improving Telemedicine Photo Quality.** *JAMA dermatology*
  Vodrahalli, K., Ko, J., Chiou, A. S., Novoa, R., Abid, A., Phung, M., Yekrang, K., Petrone, P., Zou, J., Daneshjou, R.
  2023
- **Evaluation of diagnosis diversity in artificial intelligence datasets: a scoping review.** *The British journal of dermatology*
  Chen, M. L., Rotemberg, V., Lester, J. C., Novoa, R. A., Chiou, A. S., Daneshjou, R.
  2023; 188 (2): 292-294
- **Long-term safety and efficacy of gene-corrected autologous keratinocyte grafts for recessive dystrophic epidermolysis bullosa.** *Orphanet journal of rare diseases*
  So, J. Y., Nazaroff, J., Iwummadu, C. V., Harris, N., Gorell, E. S., Fulchand, S., Bailey, I., McCarthy, D., Siprashvili, Z., Marinkovich, M. P., Tang, J. Y., Chiou, A. S.
  2022; 17 (1): 377
- **Asymptomatic, Microscopic Hematuria in Epidermolysis Bullosa: A Single Center Retrospective Case Series.** *Journal of the American Academy of Dermatology*
  Betancourt, N. J., Sum, K., Gorell, E. S., Tang, J. Y., Chiou, A. S.
  2022
- **Disparities in dermatology AI performance on a diverse, curated clinical image set.** *Science advances*
  Daneshjou, R., Vodrahalli, K., Novoa, R. A., Jenkins, M., Liang, W., Rotemberg, V., Ko, J., Swetter, S. M., Bailey, E. E., Gevaert, O., Mukherjee, P., Phung, M., Yekrang, et al
  2022; 8 (32): eabq6147
- **A global, cross-sectional survey of patient-reported outcomes, disease burden, and quality of life in epidermolysis bullosa simplex.** *Orphanet journal of rare diseases*
  So, J. Y., Fulchand, S., Wong, C. Y., Li, S., Nazaroff, J., Gorell, E. S., de Souza, M. P., Murrell, D. F., Teng, J. M., Chiou, A. S., Tang, J. Y.
  2022; 17 (1): 270
- **A qualitative exploration of the experiences of itch for adults living with epidermolysis bullosa.** *The British journal of dermatology*
  de Vere Hunt, I., Halley, M., Sum, K., Yekrang, K., Phung, M., Good, J., Linos, E., Chiou, A. S.
  1800
- **Efficacy and Safety of Upadacitinib in Patients With Moderate to Severe Atopic Dermatitis: Analysis of Follow-up Data From the Measure Up 1 and Measure Up 2 Randomized Clinical Trials.** *JAMA dermatology*
  Simpson, E. L., Papp, K. A., Blauvelt, A., Chu, C. Y., Hong, H. C., Katoh, N., Calimlim, B. M., Thyssen, J. P., Chiou, A. S., Bissonnette, R., Stein Gold, L. F., Wegzyn, C., Hu, et al
  2022
- **Histopathologic correlation of skin manifestations of multisystemic inflammatory syndrome in adults (MIS-A) associated with SARS-CoV-2 infection.** *JAAD case reports*
  So, N. A., So, J., Centkowski, S., Rana, J., Aleshin, M., Kwong, B. Y., Rieger, K., Zaba, L. C., Chiou, A. S.
  2021
- **A systematic literature review of the disease burden in patients with recessive dystrophic epidermolysis bullosa.** *Orphanet journal of rare diseases*

Tang, J. Y., Marinkovich, M. P., Lucas, E., Gorell, E., Chiou, A., Lu, Y., Gillon, J., Patel, D., Rudin, D.
2021; 16 (1): 175

- **TrueImage: A Machine Learning Algorithm to Improve the Quality of Telehealth Photos.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
  Vodrahalli, K., Daneshjou, R., Novoa, R. A., Chiou, A., Ko, J. M., Zou, J.
  2021; 26: 220–31
- **Prevalence of Potentially Allergenic Ingredients in Products Labeled for Eczema Care.** *Journal of the American Academy of Dermatology*
  Schwartz, B. L., Honari, G., Chiou, A. S., Ko, J., Sarin, K. Y., Chen, J. K.
  2021
- **Telehealth for Older Adults with Skin Disease: A Qualitative Exploration of Dermatologists' Experiences & Recommendations for Improving Care.** *The British journal of dermatology*
  de Vere Hunt, I., van Egmond, S., Nava, V., Khodosh, R., Lester, J., Chiou, A. S., Linos, E.
  2021
- **Bridging to a selective Janus kinase 1 inhibitor in severe atopic dermatitis: An instructive case with upadacitinib.** *JAAD case reports*
  Nguyen, J., Chen, J. K., Honari, G., Pol-Rodriguez, M., Ko, J. M., Chiou, A. S.
  2021; 7: 65–67
- **Pernio-like eruption associated with COVID-19 in skin of color.** *JAAD case reports*
  Daneshjou, R., Rana, J., Dickman, M., Yost, J. M., Chiou, A., Ko, J.
  2020; 6 (9): 892–97
- **An exploratory, open-label, investigator-initiated study of interleukin-17A (IL-17A) blockade in patients with moderate to severe papulopustular rosacea.** *The British journal of dermatology*
  Kumar, A. M., Chiou, A. S., Shih, Y. H., Li, S., Chang, A. L.
  2020
- **Dupilumab Treatment of Nummular Dermatitis: A Retrospective Cohort Study.** *Journal of the American Academy of Dermatology*
  Choi, S. n., Zhu, G. A., Lewis, M. A., Honari, G. n., Chiou, A. S., Ko, J. n., Chen, J. K.
  2020
- **Dupilumab for occupational irritant hand dermatitis in a nonatopic individual: A case report.** *JAAD case reports*
  Zhu, G. A., Honari, G. n., Ko, J. M., Chiou, A. S., Chen, J. K.
  2020; 6 (4): 296–98
- **Inflammatory alopecia in patients on dupilumab: a retrospective cohort study at an academic institution.** *Journal of the European Academy of Dermatology and Venereology : JEADV*
  Zhu, G. A., Kang, K. J., Chen, J. K., Novoa, R. A., Brown, R. A., Chiou, A. S., Ko, J. M., Honari, G.
  2019
- **Phase 1/2a clinical trial of gene-corrected autologous cell therapy for recessive dystrophic epidermolysis bullosa.** *JCI insight*
  Eichstadt, S., Barriga, M., Ponakala, A., Teng, C., Nguyen, N. T., Siprashvili, Z., Nazaroff, J., Gorell, E. S., Chiou, A. S., Taylor, L., Khuu, P., Keene, D. R., Rieger, et al
  2019; 4 (19)
- **Phase 2 Trial of a Neurokinin-1 Receptor Antagonist for the Treatment of Chronic Itch in Epidermolysis Bullosa Patients: A Randomized Clinical Trial.** *Journal of the American Academy of Dermatology*
  Chiou, A. S., Choi, S., Barriga, M., Dutt-Singkh, Y., Solis, D. C., Nazaroff, J., Bailey-Healy, I., Li, S., Shu, K., Joing, M., Kwon, P., Tang, J. Y.
  2019
- **Angiodestructive lymphomatoid papulosis lasting more than 45years.** *JAAD case reports*
  Lee, G. H., Bae, G. H., Rieger, K. E., Kim, Y. H., Chiou, A. S.
  2019; 5 (9): 767–69
- **Repeat patch testing in a patient with allergic contact dermatitis improved on dupilumab.** *JAAD case reports*
  Zhu, G. A., Chen, J. K., Chiou, A., Ko, J., Honari, G.
  2019; 5 (4): 336–38

- **Assessment of the Development of New Regional Dermatoses in Patients Treated for Atopic Dermatitis With Dupilumab.** *JAMA dermatology*
  Zhu, G. A., Chen, J. K., Chiou, A. n., Ko, J. n., Honari, G. n.
  2019

- **Distinguishing malignant from benign microscopic skin lesions using desorption electrospray ionization mass spectrometry imaging** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Margulis, K., Chiou, A. S., Aasi, S. Z., Tibshirani, R. J., Tang, J. Y., Zare, R. N.
  2018; 115 (25): 6347–52

- **Distinguishing malignant from benign microscopic skin lesions using desorption electrospray ionization mass spectrometry imaging.** *Proceedings of the National Academy of Sciences of the United States of America*
  Margulis, K. n., Chiou, A. S., Aasi, S. Z., Tibshirani, R. J., Tang, J. Y., Zare, R. N.
  2018

- **Localized bullous pemphigoid in a melanoma patient with dual exposure to PD-1 checkpoint inhibition and radiation therapy.** *JAAD case reports*
  Hirotsu, K. n., Chiou, A. S., Chiang, A. n., Kim, J. n., Kwong, B. Y., Pugliese, S. n.
  2017; 3 (5): 404–6

- **Cutaneous Neonatal Lupus Arising in an Infant Conceived From an Oocyte Donation Pregnancy** *JAMA DERMATOLOGY*
  Chiou, A. S., Sun, G., Kim, J., Wang, K. C., Marqueling, A. L.
  2016; 152 (7): 846-847

- **A fibrous papule with abundant CD34-immunoreactive ganglion-like multinucleated giant cells: a case report and review of the literature.** *Dermatology online journal*
  Schaberg, K. B., Chiou, A. S., Wang, K. C., Egbert, B. M.
  2015; 21 (7)

- **Tazarotene: randomized, double-blind, vehicle-controlled, and open-label concurrent trials for Basal cell carcinoma prevention and therapy in patients with Basal cell nevus syndrome.** *Cancer prevention research*
  Tang, J. Y., Chiou, A. S., Mackay-Wiggan, J. M., Aszterbaum, M., Chanana, A. M., Lee, W., Lindgren, J. A., Raphael, M. A., Thompson, B. J., Bickers, D. R., Epstein, E. H.
  2014; 7 (3): 292-299

- **Advanced aging skin and itch: addressing an unmet need** *DERMATOLOGIC THERAPY*
  Garibyan, L., Chiou, A. S., Elmariah, S. B.
  2013; 26 (2): 92-103

- **Tumor angiogenesis as a target for dietary cancer prevention.** *Journal of oncology*
  Li, W. W., Li, V. W., Hutnik, M., Chiou, A. S.
  2012; 2012: 879623-?

- **Probing Neuroserpin Polymerization and Interaction with Amyloid-beta Peptides Using Single Molecule Fluorescence** *BIOPHYSICAL JOURNAL*
  Chiou, A., Haeggloef, P., Orte, A., Chen, A. Y., Dunne, P. D., Belorgey, D., Karlsson-Li, S., Lomas, D. A., Klenerman, D.
  2009; 97 (8): 2306-2315

- **Reaction of Cl with CD4 excited to the second C-D stretching overtone** *JOURNAL OF CHEMICAL PHYSICS*
  Martin, M. R., Brown, D. J., Chiou, A. S., Zare, R. N.
  2007; 126 (4)

- **PHYS 379-Effects of reagent vibrational excitation on the Cl+CD4 reaction**
  Martin, M. R., Brown, D. J., Chiou, A. S., Zare, R. N.
  AMER CHEMICAL SOC.2006

- **Reaction products with internal energy beyond the kinematic limit result from trajectories far from the minimum energy path: An example from H+HBr -> H-2+Br** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Pomerantz, A. E., Camden, J. P., Chiou, A. S., Ausfelder, F., Chawla, N., Hase, W. L., Zare, R. N.
  2005; 127 (47): 16368-16369