

# ANDREW K. SAYDJARI

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## PUBLICATIONS

I am an author on **21+ papers** that have **588+** citations (h-index=12). This includes:

**9+ papers** as (co-)lead author with 222+ citations

**5+ papers** with **significant contributions** with 203+ citations

Most of my papers can be found online on [ADS](#), though citations outside astronomy are missing.

My ORCID is [0000-0002-6561-9002](https://orcid.org/0000-0002-6561-9002).

### Publications as (Co-)Lead Author:

1. **Saydjari, A. K.**; Finkbeiner, D. P.; Wheeler, A. J.; Holtzman, J. A.; Wilson, J. C.; Casey, A. R.; Sánchez-Maes, S.; Brownstein, J. R.; Hogg, D. W.; Blanton, M.  
 2024, arXiv.2408.07126 (submitted ApJ) Postdoc  
[Improving Radial Velocities by Marginalizing over Stars and Sky: Achieving 30 m/s RV Precision for APOGEE in the Plate Era](#)
2. **Saydjari, A. K.**; Uzsoy, A.S.; Zucker, C.; Peek, J. E. G.; Finkbeiner, D. P.  
 2023, ApJ, 954, 141. Grad  
[Measuring the 8621 Å Diffuse Interstellar Band in Gaia DR3 RVS Spectra: Obtaining a Clean Catalog by Marginalizing over Stellar Types](#)
3. **Saydjari, A. K.**; Schlafly, E. F.; Lang, D.; Meisner, A. M.; Green, G. M.; Zucker, C.; Zelko, I.; Speagle, J. S.; Daylan, T.; Lee, A.; Valdes, F.; Schlegel, D.; Finkbeiner, D. P.  
 2023, ApJS, 264, 2. Grad  
[The Dark Energy Camera Plane Survey 2 \(DECaPS2\): More Sky, Less Bias, and Better Uncertainties](#)
4. **Saydjari, A. K.**; Finkbeiner, D. P.  
 2022, ApJ, 933, 155. Grad  
[Photometry on Structured Backgrounds: Local Pixel-wise Infilling by Regression](#)
5. **Saydjari, A. K.**; Finkbeiner, D. P.  
 2022, TPAMI, 45, 2. Grad  
[Equivariant Wavelets: Fast Rotation and Translation Invariant Wavelet Scattering Transforms](#)
6. **Saydjari, A. K.**; Portillo, S. K. N.; Slepian, Z.; Kahraman, S.; Burkhart, B.; Finkbeiner, D. P.  
 2021, ApJ, 910, 122. Grad  
[Classification of Magnetohydrodynamic Simulations using Wavelet Scattering Transforms](#)
7. **Saydjari, A. K. & Weis, P.**; Wu, S.  
 2016, Adv. Energy Mat., 7, 1601622. Undergrad  
[Spanning the Solar Spectrum: Azopolymer Solar Thermal Fuels for Simultaneous UV and Visible Light Storage](#)  
 Cover Article: [AEM](#)
8. **Saydjari, A. K.**; Pietron, J. J.; Simpkins, B. S.  
 2015, Electroanalysis., 27, 1960-1967. HS

[Electrochemical Deposition and Spectroelectro-chemical Response of Bromophenol Blue Films on Gold](#)

9. Saydjari, A. K.; Long, J.; Dressick, W.; Simpkins, B. S.

2014, Chem. Phys. Lett., 608, 328-333.

HS

[Optical Interference Effect Corrections for Absorbance Spectra of Layer-by-Layer Thin Films Bearing Covalently Bound Dye](#)

**Publications with Significant Contributions:**

10. Lesser, O.; Saydjari, A. K.; Wesson M.; Yacoby, A.; Oreg, Y.

2021, PNAS, 118, 27.

Grad

[Phase-induced topological superconductivity in a planar heterostructure](#)

Designed and ran experiments in Kwant to show applicability for realistic device densities.

11. Alegria, L.D.; Böttcher, C.G.; Saydjari, A. K.; Pierce, A.T.; Lee, S.H.; Harvey, S.P.; Vool, U.; Yacoby, A.;

2021, Nature Nanotechnology, 16, 404-408.

Grad

[High-energy quasiparticle injection into mesoscopic superconductors](#)

Helped fabricate devices, collected data on dil. fridge I operated, and analyzed data/models.

12. Charboneau, D.J.; Brudvig, G.W.; Hazari, N.; Lant, H.M.C.; Saydjari, A. K.

2019, ACS Catal., 9, 3228-3241.

Undergrad

[Development of an Improved System for the Carboxylation of Aryl Halides through Mechanistic Studies](#)

M.Sc. thesis work. Designed experiments, worked up reactions and NMR, analyzed data.

13. McKee, A.; Solano, M.; Saydjari, A. K.; Bennett, C.J.; Hud, N.V.; Orlando, T.M.

2018, ChemBioChem, 19, 1-6.

Undergrad

[A Possible Path to Prebiotic Peptides Involving Silica and Hydroxy Acid-Mediated Amide Bond Formation](#)

Cover Article: [ChemBioChem](#)

Designed/ran cycling experiments, analyzed MS/MS spectra, wrote first manuscript.

14. Wang, D.; Wagner, M.; Saydjari, A. K.; Wu, S.; Butt, H.

2017, Chem. Eur. J., 23, 2628-2634.

Undergrad

[A Photoresponsive Orthogonal Supramolecular Complex Based on Host-Guest Interactions](#)

Lead quantum chemical simulations determining molecular geometry key to HG interaction.

**Publications as a Contributing Author:**

15. Zhou, R. [56 additional co-authors including Saydjari, A. K.]

2024, arXiv.2409.05140 (submitted OJA)

Postdoc

[Stellar reddening map from DESI imaging and spectroscopy](#)

Aided in map validation, data-release, reddening methods, and provided internal DESI review.

16. Edenhofer, G. [7 additional co-authors including Saydjari, A. K.]

2023, A&A, 685, A82.

Grad

[A Parsec-Scale Galactic 3D Dust Map out to 1.25 kpc from the Sun](#)

Aided in map validation, data-release, securing compute, and consulted on methods development.

17. Zasowski, G. [152 additional co-authors including Saydjari, A. K.]

2023, ApJS, 267, 44.

Grad

[The Eighteenth Data Release of the Sloan Digital Sky Surveys: Targeting and First Spectra from SDSS-V](#)

Key APOGEE pipeline team member and led dust group DIB catalog and reddening efforts.

18. Cantat-Gaudin, T. et al. [13 additional co-authors including **Saydjari, A. K.**]

2023, A&A, 669, A55.

Grad

[An empirical model of the Gaia DR3 selection function](#)

Created DECaPS2 (and high-resolution coverage maps) that were the underlying comparison used in deriving the empirical selection function.

19. Speagle, J. S. & Zucker, C. [17 additional co-authors including **Saydjari, A. K.**]

2024, ApJ, 2, 121.

Grad

[Mapping the Milky Way in 5-D with 170 Million Stars](#)

Provided feedback during method development, and on publication/code-base.

20. Speagle, J. S. & Zucker, C. [17 additional co-authors including **Saydjari, A. K.**]

2021, (submitted ApJ)

Grad

Deriving Stellar Properties, Distances, and Reddenings from Photometry and Astrometry with brutus

Provided feedback during method development, and on publication/code-base.

## Non-Refereed

### Publications as a Contributing Author:

21. Sayres, C. et al. [12 additional co-authors including **Saydjari, A. K.**]

2022, Proceedings of the SPIE, 12184

Grad

[SDSS-V robotic focal plane system: overview of coordinate systems and transforms](#)

Developed regularized fits to improve focal plane coordinate transform.

### White Papers with Significant Contributions:

22. Han, J.J. et al. [208 additional co-authors including **Saydjari, A. K.**]

2023, arXiv:2306.11784.

Grad

[NANCY: Next-generation All-sky Near-infrared Community survey](#)

Lead (wrote) the dust/reddening applications section.

23. Paladini, R. et al. [69 additional co-authors including **Saydjari, A. K.**]

2023, arXiv:2307.07642.

Grad

[Roman Early-Definition Astrophysics Survey Opportunity: Galactic Roman Infrared Plane Survey \(GRIPS\)](#)

(Co)-Developed crowded field photometry codes necessary for successful photometry in the plane.