

# ANDREW K. SAYDJARI

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## PUBLICATIONS

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I am an author on **40+ papers** that have **1197+** citations (h-index=14). This includes:

**12+ papers as (co-)lead author** with 354+ citations

**6+ papers with significant contributions** with 286+ citations

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

My ORCID is [0000-0002-6561-9002](#).

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

1. **Saydjari, A. K.** & Green, G. M.  
2025, arXiv:2507.07162 (submitted to AAS Journals) Postdoc  
[Correlations between Dust Extinction Features across All Wavelength Scales: From Diffuse Interstellar Bands to R\(V\)](#)
2. Zucker, C. & **Saydjari, A. K.** & Speagle, J. S.; Schlafly, E. F.; Green, G. M.; Benjamin, R.; Peek, J. E. G.; Edenhofer, G.; Goodman, A.; Kuhn, M. A.; Finkbeiner, D. P.  
2025, ApJ, 992, 39. Postdoc  
[A Deep, High-Angular Resolution 3D Dust Map of the Southern Galactic Plane](#)
3. **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.  
2025, ApJ, 169, 19. Postdoc  
[Improving Radial Velocities by Marginalizing over Stars and Sky: Achieving 30 m/s RV Precision for APOGEE in the Plate Era](#)
4. **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](#)
5. **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](#)
6. **Saydjari, A. K.**; Finkbeiner, D. P.  
2022, ApJ, 933, 155. Grad  
[Photometry on Structured Backgrounds: Local Pixel-wise Infilling by Regression](#)
7. **Saydjari, A. K.**; Finkbeiner, D. P.  
2022, TPAMI, 45, 2. Grad  
[Equivariant Wavelets: Fast Rotation and Translation Invariant Wavelet Scattering Transforms](#)
8. **Saydjari, A. K.**; Portillo, S. K. N.; Slepian, Z.; Kahraman, S.; Burkhardt, B.; Finkbeiner, D. P.  
2021, ApJ, 910, 122. Grad  
[Classification of Magnetohydrodynamic Simulations using Wavelet Scattering Transforms](#)

9. **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**
10. **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](#)
11. **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:

12. Uzsoy, A. M.; **Saydjari, A. K.**; et al. [38 additional co-authors]  
 2025, arXiv:2503.03138 (submitted to AAS Journals) Postdoc  
[Bayesian Component Separation for DESI LAE Automated Spectroscopic Redshifts and Photometric Targeting](#)  
 Co-advised the application of MADGICS to DESI spectra (prior refinement, error calibration, etc.)
13. 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.
14. 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.
15. 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.
16. 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.
17. 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:

18. Hilder, T. [16 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2510.07395 (submitted to AAS Journals) Postdoc  
[Unified Spectrospatial Forward Models: Spatially Continuous Maps of Weak Emission Lines in the Rosette Nebula with SDSS-V LVM](#)
19. McQuaid, T. [9 additional co-authors including **Saydjari, A. K.**]  
2025, (submitted to AAS Journals) Postdoc  
[Tomographic Distance Measurements to the Smith Cloud with SDSS-V Milky Way Mapper](#)
20. Zari, E. [19 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2509.10387 (submitted to A&A Journals) Postdoc  
[The large-scale kinematics of young stars in the Milky Way disc: first results from SDSS-V](#)
21. Chandra, V. [30 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2508.00978 (submitted to AAS Journals) Postdoc  
[Mapping the Distant and Metal-Poor Milky Way with SDSS-V](#)
22. Aftab, N. [8 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2510.22900 (accepted ApJ) Postdoc  
[The MDW H \$\alpha\$  Sky Survey: Data Release 1](#)
23. Medan, I. [9 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2509.15309 (accepted ApJ) Postdoc  
[The Importance of Standardizing Spectra in the Era of Large Spectroscopic Surveys: A Case Study of M Dwarfs in SDSS-V](#)
24. Casey, A. R. [5 additional co-authors including **Saydjari, A. K.**]  
2025, (submitted to AAS Journals) Postdoc  
A constrained linear model for continuum normalisation of stellar spectra
25. Otto, J. M. [17 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2507.07264 (submitted to AAS Journals) Postdoc  
[The Open Cluster Chemical Abundances and Mapping Survey: VIII. Galactic Chemical Gradient and Azimuthal Analysis from SDSS/MWM DR19](#)
26. SDSS Collaboration. [211 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2507.07093 (submitted to AAS Journals) Postdoc  
[The Nineteenth Data Release of the Sloan Digital Sky Survey](#)
27. Kollmeier, J.A. [438 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2507.06989 (submitted to AAS Journals) Postdoc  
[Sloan Digital Sky Survey-V: Pioneering Panoptic Spectroscopy](#)
28. Mészáros, S. [27 additional co-authors including **Saydjari, A. K.**]  
2025, AJ, 170, 2, 96. Postdoc  
[SDSS-V Milky Way Mapper \(MWM\): ASPCAP Stellar Parameters and Abundances in SDSS-V Data Release 19](#)
29. Stone-Martinez, A. [6 additional co-authors including **Saydjari, A. K.**]  
2025, AJ, 170, 2, 66. Postdoc  
[StarFlow: Leveraging Normalizing Flows for Stellar Age Estimation in SDSS-V DR19](#)
30. Speagle, J. S. & Zucker, C. [17 additional co-authors including **Saydjari, A. K.**]  
2025, arXiv: 2503.02227 (submitted to AAS Journals) Grad  
[Deriving Stellar Properties, Distances, and Reddenings from Photometry and Astrometry with BRUTUS](#)

- Provided feedback during method development, and on publication/code-base.
31. Zhou, R. [56 additional co-authors including **Saydjari, A. K.**] 2025, OJA, 8, 001c.141680. Postdoc  
[Stellar reddening map from DESI imaging and spectroscopy](#)  
Aided in map validation, data-release, reddening methods, and provided internal DESI review.
32. 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.
33. 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.
34. 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.
35. 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.

## Non-Refereed

### White Papers as (Co-)Lead Author:

36. **Saydjari, A. K.** et al. [24 additional co-authors] 2025, PRIMA GO Handbook Volume 2, 92. Postdoc  
[PRIM\(All\): A PRIMA All-Sky, Polarized, Dust Map and Point Source Catalog](#)

### White Papers with Significant Contributions:

37. 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.
38. 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.
39. Molinari, S. et al. [29 additional co-authors including **Saydjari, A. K.**] 2025, PRIMA GO Handbook Volume 2, 84. Postdoc  
[PRIMAGAL, a full Galactic Plane Survey with PRIMager: The Role of Magnetic Field in the Formation, Fragmentation and Demise of Dense star-forming Filamentary Clouds](#)  
Improved survey depth/design forecasting

## Technical Publications as a Contributing Author:

40. 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.