

# David E Cane

## List of Publications by Year in descending order

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214  
papers

16,782  
citations

10956

71  
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116  
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242  
all docs

242  
docs citations

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times ranked

6754  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Biosynthesis of Complex Polyketides in a Metabolically Engineered Strain of <i>E. coli</i> . <i>Science</i> , 2001, 291, 1790-1792.  | 6.0  | 687       |
| 2  | Genome-minimized <i>Streptomyces</i> host for the heterologous expression of secondary metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 2646-2651.      | 3.3  | 455       |
| 3  | Crystal Structure of Pentalenene Synthase: Mechanistic Insights on Terpenoid Cyclization Reactions in Biology. <i>Science</i> , 1997, 277, 1820-1824.  | 6.0  | 447       |
| 4  | Enzymic formation of sesquiterpenes. <i>Chemical Reviews</i> , 1990, 90, 1089-1103.  | 23.0 | 446       |
| 5  | Terpene synthases are widely distributed in bacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 857-862.   | 3.3  | 441       |
| 6  | Tolerance and Specificity of Polyketide Synthases. <i>Annual Review of Biochemistry</i> , 1999, 68, 219-253.   | 5.0  | 348       |
| 7  | Dissecting and Exploiting Intermodular Communication in Polyketide Synthases. <i>Science</i> , 1999, 284, 482-485.   | 6.0  | 330       |
| 8  | Structure and Mechanism of the 6-Deoxyerythronolide B Synthase. <i>Annual Review of Biochemistry</i> , 2007, 76, 195-221.  | 5.0  | 282       |
| 9  | Precursor-Directed Biosynthesis of Erythromycin Analogs by an Engineered Polyketide Synthase. <i>Science</i> , 1997, 277, 367-369.   | 6.0  | 271       |
| 10 | The 2.7-A crystal structure of a 194-kDa homodimeric fragment of the 6-deoxyerythronolide B synthase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 11124-11129. | 3.3  | 259       |
| 11 | The parallel and convergent universes of polyketide synthases and nonribosomal peptide synthetases. <i>Chemistry and Biology</i> , 1999, 6, R319-R325.   | 6.2  | 250       |
| 12 | Unified stereochemical model of polyether antibiotic structure and biogenesis. <i>Journal of the American Chemical Society</i> , 1983, 105, 3594-3600.   | 6.6  | 223       |
| 13 | Biosynthesis of the earthy odorant geosmin by a bifunctional <i>Streptomyces coelicolor</i> enzyme. <i>Nature Chemical Biology</i> , 2007, 3, 711-715.   | 3.9  | 209       |
| 14 | Engineered <i>Streptomyces avermitilis</i> Host for Heterologous Expression of Biosynthetic Gene Cluster for Secondary Metabolites. <i>ACS Synthetic Biology</i> , 2013, 2, 384-396.                                   | 1.9  | 197       |
| 15 | Crystal Structure Determination of Aristolochene Synthase from the Blue Cheese Mold, <i>Penicillium roqueforti</i> *. <i>Journal of Biological Chemistry</i> , 2000, 275, 25533-25539.                                 | 1.6  | 185       |
| 16 | Manipulation of macrolide ring size by directed mutagenesis of a modular polyketide synthase. <i>Journal of the American Chemical Society</i> , 1995, 117, 9105-9106.  | 6.6  | 180       |
| 17 | X-ray Crystal Structure of Aristolochene Synthase from <i>Aspergillus terreus</i> and Evolution of Templates for the Cyclization of Farnesyl Diphosphate. <i>Biochemistry</i> , 2007, 46, 1941-1951.                   | 1.2  | 161       |
| 18 | Structural and Mechanistic Analysis of Protein Interactions in Module 3 of the 6-Deoxyerythronolide B Synthase. <i>Chemistry and Biology</i> , 2007, 14, 931-943.  | 6.2  | 151       |

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|----|---|------|-----------|
| 19 | Exploration and Mining of the Bacterial Terpenome. <i>Accounts of Chemical Research</i> , 2012, 45, 463-472.  | 7.6  | 150       |
| 20 | Pentalenene Synthase. Analysis of Active Site Residues by Site-Directed Mutagenesis. <i>Journal of the American Chemical Society</i> , 2002, 124, 7681-7689.  | 6.6  | 147       |
| 21 | Biosynthesis of the Sesquiterpene Antibiotic Albaflavenone in <i>Streptomyces coelicolor</i> A3(2). <i>Journal of Biological Chemistry</i> , 2008, 283, 8183-8189.  | 1.6  | 147       |
| 22 | Macrolide biosynthesis. 4. Intact incorporation of a chain-elongation intermediate into erythromycin. <i>Journal of the American Chemical Society</i> , 1987, 109, 1255-1257.   | 6.6  | 146       |
| 23 | Pentalenene Synthase. Purification, Molecular Cloning, Sequencing, and High-Level Expression in <i>Escherichia coli</i> of a Terpenoid Cyclase from <i>Streptomyces</i> UC5319. <i>Biochemistry</i> , 1994, 33, 5846-5857.                              | 1.2  | 142       |
| 24 | Mechanism and specificity of the terminal thioesterase domain from the erythromycin polyketide synthase. <i>Chemistry and Biology</i> , 1999, 6, 117-125.   | 6.2  | 140       |
| 25 | Isoprenoid biosynthesis. Stereochemistry of the cyclization of allylic pyrophosphates. <i>Accounts of Chemical Research</i> , 1985, 18, 220-226.  | 7.6  | 138       |
| 26 | Geosmin Biosynthesis. <i>Streptomyces coelicolor</i> Germacradienol/Germacrene D Synthase Converts Farnesyl Diphosphate to Geosmin. <i>Journal of the American Chemical Society</i> , 2006, 128, 8128-8129.   | 6.6  | 138       |
| 27 | Structure of Epi-Isozizaene Synthase from <i>Streptomyces coelicolor</i> A3(2), a Platform for New Terpenoid Cyclization Templates. <i>Biochemistry</i> , 2010, 49, 1787-1797.  | 1.2  | 137       |
| 28 | Genome Mining in <i>Streptomyces coelicolor</i> : Molecular Cloning and Characterization of a New Sesquiterpene Synthase. <i>Journal of the American Chemical Society</i> , 2006, 128, 6022-6023.   | 6.6  | 134       |
| 29 | Expression and mechanistic analysis of a germacradienol synthase from <i>Streptomyces coelicolor</i> implicated in geosmin biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 1547-1551. | 3.3  | 131       |
| 30 | Biochemistry and Molecular Genetics of the Biosynthesis of the Earthy Odorant Methylisoborneol in <i>Streptomyces coelicolor</i> . <i>Journal of the American Chemical Society</i> , 2008, 130, 8908-8909.  | 6.6  | 125       |
| 31 | Assessing the Balance between Protein-Protein Interactions and Enzyme-Substrate Interactions in the Channeling of Intermediates between Polyketide Synthase Modules. <i>Journal of the American Chemical Society</i> , 2001, 123, 6465-6474.            | 6.6  | 124       |
| 32 | Selective Protein-Protein Interactions Direct Channeling of Intermediates between Polyketide Synthase Modules. <i>Biochemistry</i> , 2001, 40, 2326-2331.   | 1.2  | 122       |
| 33 | Quantitative Analysis of the Relative Contributions of Donor Acyl Carrier Proteins, Acceptor Ketosynthases, and Linker Regions to Intermodular Transfer of Intermediates in Hybrid Polyketide Synthases. <i>Biochemistry</i> , 2002, 41, 5056-5066.     | 1.2  | 120       |
| 34 | Geosmin Biosynthesis in <i>Streptomyces avermitilis</i> . Molecular Cloning, Expression, and Mechanistic Study of the Germacradienol/Geosmin Synthase. <i>Journal of Antibiotics</i> , 2006, 59, 471-479.   | 1.0  | 116       |
| 35 | Cell-free synthesis of polyketides by recombinant erythromycin polyketide synthases. <i>Nature</i> , 1995, 378, 263-266.  | 13.7 | 115       |
| 36 | Assembly Line Polyketide Synthases: Mechanistic Insights and Unsolved Problems. <i>Biochemistry</i> , 2014, 53, 2875-2883.  | 1.2  | 114       |

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|----|---|------|-----------|
| 37 | Insights into Channel Architecture and Substrate Specificity from Crystal Structures of Two Macrocyclic-Forming Thioesterases of Modular Polyketide Synthases. <i>Biochemistry</i> , 2002, 41, 12598-12606.           | 1.2  | 113       |
| 38 | A Gene Cluster for Biosynthesis of the Sesquiterpenoid Antibiotic Pentalenolactone in <i>Streptomyces avermitilis</i> . <i>Biochemistry</i> , 2006, 45, 6179-6186.  | 1.2  | 113       |
| 39 | Solution structure and proposed domain-domain recognition interface of an acyl carrier protein domain from a modular polyketide synthase. <i>Protein Science</i> , 2007, 16, 2093-2107.                               | 3.1  | 107       |
| 40 | Sesquiterpene Biosynthesis: Cyclization Mechanisms. , 1999, , 155-200.  |      | 106       |
| 41 | Isolation and Characterization of the Gene Associated with Geosmin Production in Cyanobacteria. <i>Environmental Science &amp; Technology</i> , 2008, 42, 8027-8032.  | 4.6  | 106       |
| 42 | Introduction: Polyketide and Nonribosomal Polypeptide Biosynthesis. From Collie to Coli. <i>Chemical Reviews</i> , 1997, 97, 2463-2464.   | 23.0 | 105       |
| 43 | Structure and mechanism of assembly line polyketide synthases. <i>Current Opinion in Structural Biology</i> , 2016, 41, 10-18.  | 2.6  | 104       |
| 44 | Biosynthesis of pentalenene and pentalenolactone. <i>Journal of the American Chemical Society</i> , 1990, 112, 4513-4524.   | 6.6  | 103       |
| 45 | Evidence for Two Catalytically Independent Clusters of Active Sites in a Functional Modular Polyketide Synthase. <i>Biochemistry</i> , 1996, 35, 12363-12368.   | 1.2  | 100       |
| 46 | Reprogramming a module of the 6-deoxyerythronolide B synthase for iterative chain elongation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 4110-4115.          | 3.3  | 97        |
| 47 | Engineered biosynthesis of a triketide lactone from an incomplete modular polyketide synthase. <i>Journal of the American Chemical Society</i> , 1994, 116, 11612-11613.  | 6.6  | 96        |
| 48 | Trichodiene Synthase. Probing the Role of the Highly Conserved Aspartate-Rich Region by Site-Directed Mutagenesis. <i>Biochemistry</i> , 1996, 35, 12369-12376.   | 1.2  | 95        |
| 49 | Aristolochene Synthase: Mechanistic Analysis of Active Site Residues by Site-Directed Mutagenesis. <i>Journal of the American Chemical Society</i> , 2004, 126, 7212-7221.  | 6.6  | 94        |
| 50 | Extender Unit and Acyl Carrier Protein Specificity of Ketosynthase Domains of the 6-Deoxyerythronolide B Synthase. <i>Journal of the American Chemical Society</i> , 2006, 128, 3067-3074.                            | 6.6  | 94        |
| 51 | Structure of 4-diphosphocytidyl-2-C-methylerythritol synthetase involved in mevalonate-independent isoprenoid biosynthesis. <i>Nature Structural Biology</i> , 2001, 8, 641-648.                                      | 9.7  | 93        |
| 52 | Stereochemical studies of isoprenoid biosynthesis. Biosynthesis of pentalenolactone from [U-13C6]glucose and [6-2H2]glucose. <i>Journal of the American Chemical Society</i> , 1981, 103, 1838-1843.                  | 6.6  | 92        |
| 53 | Genome Mining in <i>Streptomyces avermitilis</i> : Cloning and Characterization of SAV_76, the Synthase for a New Sesquiterpene, Avermitilol. <i>Journal of the American Chemical Society</i> , 2010, 132, 8850-8851. | 6.6  | 91        |
| 54 | Cyclonerodiol biosynthesis and the enzymic conversion of farnesyl to nerolidyl pyrophosphate. <i>Journal of the American Chemical Society</i> , 1981, 103, 914-931.   | 6.6  | 90        |

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|----|--|-----|-----------|
| 55 | X-ray Crystal Structures of D100E Trichodiene Synthase and Its Pyrophosphate Complex Reveal the Basis for Terpene Product Diversity. <i>Biochemistry</i> , 2002, 41, 1732-1741.  | 1.2 | 90        |
| 56 | Engineered Biosynthesis of Structurally Diverse Tetraketides by a Trimodular Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 1996, 118, 9184-9185.  | 6.6 | 86        |
| 57 | Revisiting the modularity of modular polyketide synthases. <i>Current Opinion in Chemical Biology</i> , 2009, 13, 135-143.   | 2.8 | 83        |
| 58 | Biosynthesis of the Sesquiterpene Antibiotic Albaflavenone in <i>Streptomyces coelicolor</i> . Mechanism and Stereochemistry of the Enzymatic Formation of Epi-isozizaene. <i>Journal of the American Chemical Society</i> , 2009, 131, 6332-6333. | 6.6 | 82        |
| 59 | [44] Monoterpene and sesquiterpene cyclases. <i>Methods in Enzymology</i> , 1985, 110, 383-405.  | 0.4 | 81        |
| 60 | Alcohol Stereochemistry in Polyketide Backbones Is Controlled by the $\beta^2$ -Ketoreductase Domains of Modular Polyketide Synthases. <i>Journal of the American Chemical Society</i> , 1998, 120, 2478-2479.                                     | 6.6 | 81        |
| 61 | Dissecting the Role of Acyltransferase Domains of Modular Polyketide Synthases in the Choice and Stereochemical Fate of Extender Units. <i>Biochemistry</i> , 1999, 38, 1643-1651.   | 1.2 | 81        |
| 62 | Biosynthesis of Vitamin B6: Enzymatic Conversion of 1-Deoxy-d-xylulose-5-phosphate to Pyridoxol Phosphate. <i>Journal of the American Chemical Society</i> , 1999, 121, 7722-7723.   | 6.6 | 81        |
| 63 | Stereospecificity of Ketoreductase Domains of the 6-Deoxyerythronolide B Synthase. <i>Journal of the American Chemical Society</i> , 2007, 129, 13758-13769.   | 6.6 | 81        |
| 64 | Molecular recognition between ketosynthase and acyl carrier protein domains of the 6-deoxyerythronolide B synthase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 22066-22071.               | 3.3 | 81        |
| 65 | Polyether biosynthesis. 2. Origin of the oxygen atoms of monensin A. <i>Journal of the American Chemical Society</i> , 1982, 104, 7274-7281.   | 6.6 | 79        |
| 66 | Gain of Function Mutagenesis of the Erythromycin Polyketide Synthase. 2. Engineered Biosynthesis of an Eight-Membered Ring Tetraketide Lactone. <i>Journal of the American Chemical Society</i> , 1997, 119, 11339-11340.                          | 6.6 | 79        |
| 67 | The Biochemical Basis for Stereochemical Control in Polyketide Biosynthesis. <i>Journal of the American Chemical Society</i> , 2009, 131, 18501-18511.   | 6.6 | 79        |
| 68 | Structure and Mechanism of the <i>trans</i> -Acting Acyltransferase from the Disorazole Synthase. <i>Biochemistry</i> , 2011, 50, 6539-6548.   | 1.2 | 78        |
| 69 | Gain-of-Function Mutagenesis of a Modular Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 1997, 119, 4309-4310.   | 6.6 | 77        |
| 70 | Pre-Steady-State Kinetic Analysis of the Trichodiene Synthase Reaction Pathway. <i>Biochemistry</i> , 1997, 36, 8332-8339.   | 1.2 | 75        |
| 71 | Aristolochene biosynthesis. Stereochemistry of the deprotonation steps in the enzymatic cyclization of farnesyl pyrophosphate. <i>Journal of the American Chemical Society</i> , 1990, 112, 3209-3210.   | 6.6 | 73        |
| 72 | Crystal Structure of Albaflavenone Monooxygenase Containing a Moonlighting Terpene Synthase Active Site. <i>Journal of Biological Chemistry</i> , 2009, 284, 36711-36719.  | 1.6 | 73        |

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|----|---|-----|-----------|
| 73 | Structure-Based Dissociation of a Type I Polyketide Synthase Module. <i>Chemistry and Biology</i> , 2007, 14, 784-792.  | 6.2 | 72        |
| 74 | Analysis of the Molecular Recognition Features of Individual Modules Derived from the Erythromycin Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 2000, 122, 4847-4852.   | 6.6 | 71        |
| 75 | Polyketide Double Bond Biosynthesis. Mechanistic Analysis of the Dehydratase-Containing Module 2 of the Picromycin/Methymycin Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 2005, 127, 5730-5740.  | 6.6 | 71        |
| 76 | Structural and mechanistic analysis of trichodiene synthase using site-directed mutagenesis: Probing the catalytic function of tyrosine-295 and the asparagine-225/serine-229/glutamate-233a€" <math display="block">\frac{1}{2} </math>. <i>Archives of Biochemistry and Biophysics</i> , 2003, 417, 1-10. | 1.4 | 71        |
| 77 | Geosmin Biosynthesis. Mechanism of the Fragmentation~Rearrangement in the Conversion of Germacradienol to Geosmin. <i>Journal of the American Chemical Society</i> , 2008, 130, 428-429.  | 6.6 | 71        |
| 78 | Trichodiene Synthase. Identification of Active Site Residues by Site-Directed Mutagenesis. <i>Biochemistry</i> , 1995, 34, 2480-2488.   | 1.2 | 70        |
| 79 | Genome Mining in <i>Streptomyces clavuligerus</i> : Expression and Biochemical Characterization of Two New Cryptic Sesquiterpene Synthases. <i>Chemistry and Biology</i> , 2011, 18, 32-37.   | 6.2 | 70        |
| 80 | In Vitro Reconstitution and Analysis of the 6-Deoxyerythronolide B Synthase. <i>Journal of the American Chemical Society</i> , 2013, 135, 16809-16812.  | 6.6 | 70        |
| 81 | Isotopically sensitive branching in the formation of cyclic monoterpenes: proof that (-)-alpha-pinene and (-)-beta-pinene are synthesized by the same monoterpene cyclase via deprotonation of a common intermediate. <i>Biochemistry</i> , 1987, 26, 5383-5389.  | 1.2 | 69        |
| 82 | Aristolochene Synthase: Purification, Molecular Cloning, High-Level Expression in <i>Escherichia coli</i> , and Characterization of the <i>Aspergillus terreus</i> Cyclase. <i>Archives of Biochemistry and Biophysics</i> , 2000, 376, 354-364.  | 1.4 | 69        |
| 83 | Macrolide biosynthesis. 7. Incorporation of polyketide chain elongation intermediates into methymycin. <i>Journal of the American Chemical Society</i> , 1993, 115, 522-526.  | 6.6 | 68        |
| 84 | Mechanistic Analysis of Acyl Transferase Domain Exchange in Polyketide Synthase Modules. <i>Journal of the American Chemical Society</i> , 2003, 125, 5366-5374.  | 6.6 | 67        |
| 85 | X-ray Crystallographic Studies of Substrate Binding to Aristolochene Synthase Suggest a Metal Ion Binding Sequence for Catalysis. <i>Journal of Biological Chemistry</i> , 2008, 283, 15431-15439.  | 1.6 | 67        |
| 86 | Aristolochene biosynthesis and enzymatic cyclization of farnesyl pyrophosphate. <i>Journal of the American Chemical Society</i> , 1989, 111, 8914-8916.   | 6.6 | 66        |
| 87 | Novel terpenes generated by heterologous expression of bacterial terpene synthase genes in an engineered <i>Streptomyces</i> host. <i>Journal of Antibiotics</i> , 2015, 68, 385-394.   | 1.0 | 66        |
| 88 | Understanding Substrate Specificity of Polyketide Synthase Modules by Generating Hybrid Multimodular Synthases. <i>Journal of Biological Chemistry</i> , 2003, 278, 42020-42026.  | 1.6 | 65        |
| 89 | Genome Mining in <i>Streptomyces</i> . Elucidation of the Role of Baeyer~Villiger Monooxygenases and Non-Heme Iron-Dependent Dehydrogenase/Oxygenases in the Final Steps of the Biosynthesis of Pentalenolactone and Neopentalenolactone. <i>Biochemistry</i> , 2011, 50, 1739-1754.                        | 1.2 | 65        |
| 90 | A functional chimeric modular polyketide synthase generated via domain replacement. <i>Chemistry and Biology</i> , 1996, 3, 827-831.  | 6.2 | 64        |

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|-----|--|-----|-----------|
| 91  | Programming of Erythromycin Biosynthesis by a Modular Polyketide Synthase. <i>Journal of Biological Chemistry</i> , 2010, 285, 27517-27523.  | 1.6 | 64        |
| 92  | Stereospecificity of the Dehydratase Domain of the Erythromycin Polyketide Synthase. <i>Journal of the American Chemical Society</i> , 2010, 132, 14697-14699.   | 6.6 | 64        |
| 93  | Characterization of a silent sesquiterpenoid biosynthetic pathway in <i>Streptomyces avermitilis</i> controlling <i>ε</i> -isozizaene albaflavenone biosynthesis and isolation of a new oxidized <i>ε</i> -isozizaene metabolite. <i>Microbial Biotechnology</i> , 2011, 4, 184-191. | 2.0 | 64        |
| 94  | Reconstituting Modular Activity from Separated Domains of 6-Deoxyerythronolide B Synthase. <i>Biochemistry</i> , 2004, 43, 13892-13898.  | 1.2 | 63        |
| 95  | Genome Mining in <i>Streptomyces</i> . Discovery of an Unprecedented P450-Catalyzed Oxidative Rearrangement That Is the Final Step in the Biosynthesis of Pentalenolactone. <i>Journal of the American Chemical Society</i> , 2011, 133, 2128-2131.                                  | 6.6 | 63        |
| 96  | Reprogramming the Chemodiversity of Terpenoid Cyclization by Remolding the Active Site Contour of <i>ε</i> -Isozizaene Synthase. <i>Biochemistry</i> , 2014, 53, 1155-1168.  | 1.2 | 62        |
| 97  | Mechanism of the pyrophosphate migration in the enzymic cyclization of geranyl and linalyl pyrophosphates to (+)- and (-)-bornyl pyrophosphates. <i>Biochemistry</i> , 1985, 24, 7077-7085.  | 1.2 | 61        |
| 98  | Expression, Site-Directed Mutagenesis, and Steady State Kinetic Analysis of the Terminal Thioesterase Domain of the Methymycin/Picromycin Polyketide Synthase. <i>Biochemistry</i> , 2002, 41, 12590-12597.  | 1.2 | 61        |
| 99  | Genome Mining in <i>Streptomyces avermitilis</i> : A Biochemical Baeyer-Villiger Reaction and Discovery of a New Branch of the Pentalenolactone Family Tree. <i>Biochemistry</i> , 2009, 48, 6431-6440.  | 1.2 | 60        |
| 100 | Molecular Recognition of the Substrate Diphosphate Group Governs Product Diversity in Trichodiene Synthase Mutants. <i>Biochemistry</i> , 2005, 44, 6153-6163.   | 1.2 | 59        |
| 101 | Structure and Function of Fusicoccadiene Synthase, a Hexameric Bifunctional Diterpene Synthase. <i>ACS Chemical Biology</i> , 2016, 11, 889-899.   | 1.6 | 59        |
| 102 | Mechanism and Stereochemistry of the Germacradienol/Germacrene D Synthase of <i>Streptomyces coelicolor</i> A3(2). <i>Journal of the American Chemical Society</i> , 2004, 126, 2678-2679.   | 6.6 | 58        |
| 103 | Identification of NanE as the Thioesterase for Polyether Chain Release in Nanchangmycin Biosynthesis. <i>Chemistry and Biology</i> , 2006, 13, 945-955.  | 6.2 | 58        |
| 104 | Enzymic cyclization of geranyl pyrophosphate to bornyl pyrophosphate. Role of the pyrophosphate moiety. <i>Journal of the American Chemical Society</i> , 1982, 104, 5831-5833.  | 6.6 | 57        |
| 105 | Trichodiene synthase. Synergistic inhibition by inorganic pyrophosphate and aza analogs of the bisaboyl cation. <i>Journal of Organic Chemistry</i> , 1992, 57, 3454-3462.   | 1.7 | 57        |
| 106 | Exploring biosynthetic diversity with trichodiene synthase. <i>Archives of Biochemistry and Biophysics</i> , 2007, 466, 260-266.   | 1.4 | 56        |
| 107 | Exploring the Influence of Domain Architecture on the Catalytic Function of Diterpene Synthases. <i>Biochemistry</i> , 2017, 56, 2010-2023.  | 1.2 | 56        |
| 108 | Isolation and characterization of 10-deoxymethynolide produced by <i>Streptomyces venezuelae</i> . <i>Journal of Antibiotics</i> , 1992, 45, 1981-1982.  | 1.0 | 55        |



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|-----|---|-----|-----------|
| 109 | Mechanistic Insights from the Binding of Substrate and Carbocation Intermediate Analogues to Aristolochene Synthase. <i>Biochemistry</i> , 2013, 52, 5441-5453.   | 1.2 | 55        |
| 110 | Protein-Protein Interactions, Not Substrate Recognition, Dominate the Turnover of Chimeric Assembly Line Polyketide Synthases. <i>Journal of Biological Chemistry</i> , 2016, 291, 16404-16415.                                   | 1.6 | 55        |
| 111 | Aristolochene Synthase. Elucidation of the Cryptic Germacrene A Synthase Activity Using the Anomalous Substrate Dihydrofarnesyl Diphosphate. <i>Journal of the American Chemical Society</i> , 1996, 118, 10037-10040.            | 6.6 | 54        |
| 112 | Pentalenene Synthase. Histidine-309 Is Not Required for Catalytic Activity. <i>Journal of the American Chemical Society</i> , 1999, 121, 591-592.   | 6.6 | 54        |
| 113 | Trichodiene biosynthesis and the role of nerolidyl pyrophosphate in the enzymic cyclization of farnesyl pyrophosphate. <i>Journal of the American Chemical Society</i> , 1988, 110, 6865-6870.                                    | 6.6 | 53        |
| 114 | Remarkably broad substrate specificity of a modular polyketide synthase in a cell-free system. <i>Journal of the American Chemical Society</i> , 1995, 117, 11373-11374.  | 6.6 | 53        |
| 115 | Precursor-Directed Biosynthesis. <i>Chemistry and Biology</i> , 2002, 9, 131-142.   | 6.2 | 53        |
| 116 | Pentalenolactone Biosynthesis. Molecular Cloning and Assignment of Biochemical Function to PtlI, a Cytochrome P450 of <i>Streptomyces avermitilis</i> . <i>Journal of the American Chemical Society</i> , 2006, 128, 13036-13037. | 6.6 | 53        |
| 117 | Pentalenene biosynthesis and the enzymic cyclization of farnesyl pyrophosphate. <i>Journal of the American Chemical Society</i> , 1983, 105, 122-124.   | 6.6 | 52        |
| 118 | Structure and Stereospecificity of the Dehydratase Domain from the Terminal Module of the Rifamycin Polyketide Synthase. <i>Biochemistry</i> , 2013, 52, 8916-8928.   | 1.2 | 51        |
| 119 | A Turnstile Mechanism for the Controlled Growth of Biosynthetic Intermediates on Assembly Line Polyketide Synthases. <i>ACS Central Science</i> , 2016, 2, 14-20.   | 5.3 | 51        |
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