

CITATION REPORT

List of articles citing

Hydrogen-enhanced localized plasticity mechanism for hydrogen-related fracture

DOI: 10.1016/0921-5093(94)90975-x

Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 176, 191-202.

Source: <https://exaly.com/paper-pdf/24952782/citation-report.pdf>

Version: 2024-04-28

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
1417	Mechanics of the hydrogen-dislocation-impurity interactions. Increasing shear modulus. 1995 , 43, 49-90		266
1416	The influence of mobility of dissolved hydrogen on the elastic response of a metal. 1995 , 43, 1385-1407		78
1415	Effect of phase composition and hydrogen level on the deformation behavior of titanium-hydrogen alloys. 1996 , 27, 1869-1876		51
1414	Dynamic strain aging and hydrogen-induced softening in alpha titanium. 1996 , 27, 1877-1887		60
1413	Numerical analysis of the interaction of solute hydrogen atoms with the stress field of a crack. 1996 , 33, 1709-1723		25
1412	Hydrogen-assisted stable crack growth in iron-3 wt% silicon steel. 1996 , 44, 3125-3140		31
1411	Modeling of hydrogen transport and elastically accommodated hydride formation near a crack tip. 1996 , 44, 179-205		74
1410	Hydrogen-enhanced dislocation emission, motion and nucleation of hydrogen-induced cracking for steel. 1997 , 40, 530-538		23
1409	Hydrogen transport and large strain elastoplasticity near a notch in alloy X-750. 1998 , 59, 827-845		32
1408	Hydrogen effects on the interaction between dislocations. 1998 , 46, 1749-1757		346
1407	Enhanced hydrogen concentrations ahead of rounded notches and cracks. Competition between plastic strain and hydrostatic stress. 1998 , 46, 1519-1526		83
1406	Interaction of local elastoplasticity with hydrogen: embrittlement effects. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 260, 41-47	5.3	19
1405	Hydrogen embrittlement of 316L type stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 272, 279-283	5.3	58
1404	Fracture mechanism of TiAl intermetallics caused by hydride and atomic hydrogen. 1999 , 42, 511-520		3
1403	Hydrogen-Induced Deformations of Metals Followed by in Situ Scanning Tunneling Microscopy. Palladium Electrolytic Hydrogen Charging and Discharging in Alkaline Solution. 1999 , 15, 1-5		25
1402	The use of UHP Ni and Ni Base Single Crystals to Study the Stress Corrosion Cracking Mechanisms of Alloy 600 in PWR Environment. 2000 , 41, 210-218		4
1401	Interaction between blue brittleness and stress corrosion cracking. 2000 , 280, 250-254		13

1400	Prediction of threshold stress intensity factor for hydrogen induced intergranular cracking of tubular steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 276, 141-146	5.3	3
1399	Deformation and fracture of the PWA 1472 superalloy single crystal. 2000 , 48, 469-479		17
1398	A study of internal hydrogen embrittlement of steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 286, 269-281	5.3	80
1397	Interaction of hydrogen with dislocation pile-ups and hydrogen induced softening of pure iron. 2000 , 43, 245-251		27
1396	Hydrogen-enhanced dislocation velocities in Ni3Al single crystals. 2000 , 15, 7-9		2
1395	Hydrogen-enhanced local plasticity in aluminum: an ab initio study. 2001 , 87, 095501		112
1394	A dramatic decrease of the dislocation velocity in Ni3Al single crystals under the influence of hydrogen. 2001 , 9, 355-360		3
1393	Ductile Crack Growth Resistance in Hydrogen-Charged Steels. 2001 , 42, 132-137		31
1392	Hydrogen thermal desorption relevant to delayed-fracture susceptibility of high-strength steels. 2001 , 32, 339-347		243
1391	Microstructure/mechanical properties relationship in electrodeposited Ni/Cu nanolaminates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 301, 23-34	5.3	19
1390	Hydrogen-enhanced microplasticity of austenitic steels studied by means of internal friction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 300, 284-290	5.3	10
1389	Cyclic plastic deformation behaviour of Ni single crystals oriented for single slip as a function of hydrogen content. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 314, 7-11	5.3	20
1388	Hydrogen induced shear localization of the plastic flow in metals and alloys. 2001 , 20, 857-872		196
1387	Nanomechanical probes as new approaches to hydrogen/deformation interaction studies. 2001 , 68, 619-646		86
1386	The thermodynamics aspects of hydrogen induced embrittlement. 2001 , 68, 647-669		38
1385	Hydrogen induced plasticity in stress corrosion cracking of engineering systems. 2001 , 68, 693-729		109
1384	A micromechanics approach to the study of hydrogen transport and embrittlement. 2001 , 68, 803-837		150
1383	The effects of hydrogen on the deformation and fracture of Titanium. 2001 , 49, 4313-4323		126

1382	Accelerated failure in high strength steel by alternating hydrogen-charging potential. 2001 , 44, 947-952		36
1381	Energetics of hydrogen impurities in aluminum and their effect on mechanical properties. 2002 , 65,		68
1380	Function of hydrogen in intergranular fracture of martensitic steels. 2002 , 82, 3415-3425		50
1379	Transmission electron microscopy observations and micromechanical/continuum models for the effect of hydrogen on the mechanical behaviour of metals. 2002 , 82, 3405-3413		58
1378	Simulation of time-discontinuous chemically-aided intergranular fracture. 2002 , 24, 490-500		2
1377	Internal Hydrogen-induced Embrittlement in Iron Single Crystals. 2000 , 31-47		3
1376	The Use of Ultra-High-Purity Metals and Alloys to Study Environment-Sensitive Damage Mechanisms in Nuclear Power Plants. 2002 , 189, 59-68		1
1375	Numerical simulations of hydrogen-dislocation interactions in fcc stainless steels.: part I: hydrogen-dislocation interactions in bulk crystals. 2002 , 50, 1507-1522		105
1374	Numerical simulations of hydrogen-dislocation interactions in fcc stainless steels.. 2002 , 50, 1523-1538		57
1373	Liquid NiBe penetration and recrystallisation in tungsten. 2003 , 21, 159-170		9
1372	Toward a phenomenological description of hydrogen-induced decohesion at particle/matrix interfaces. 2003 , 51, 1509-1531		69
1371	Fatigue behavior of a high strength steel in vacuum, in air and in 3.5% NaCl solution under cathodic protection. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 345, 14-22	5-3	5
1370	Study of correlation between hydrogen-induced stress and hydrogen embrittlement. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 347, 291-299	5-3	70
1369	Effects of strain rate and temperature on tensile behavior of hydrogen-charged SA508 Cl.3 pressure vessel steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 348, 309-318	5-3	56
1368	Fatigue damage and its interaction with hydrogen in martensitic steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 348, 192-200	5-3	39
1367	Effects of loading frequency on fatigue crack growth mechanisms in β Ti microstructure with large colony size. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 356, 81-92	5-3	25
1366	Ultra-long cycle fatigue of high-strength carbon steels part I: review and analysis of the mechanism of failure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 356, 227-235	5-3	82
1365	Diagnostic experimental results on the hydrogen embrittlement of austenitic steels. 2003 , 51, 1293-1305		65

1364	On the effect of hydrogen on plastic instabilities in metals. 2003 , 51, 2717-2730		103
1363	Hydrogen-assisted Cracking. 2003 , 31-101		96
1362	Environmentally Assisted Fatigue in the Gaseous Atmosphere. 2003 , 211-280		19
1361	Atomistic simulations of effect of hydrogen on kink-pair energetics of screw dislocations in bcc iron. 2003 , 51, 1767-1773		65
1360	Stability and clusterization of hydrogen-vacancy complexes in Fe: An ab initio study. 2003 , 67,		241
1359	Micromechanics and numerical modelling of the hydrogen-particle-matrix interactions in nickel-base alloys. 2003 , 11, 523-551		31
1358	Hydrogen-affected cross-slip process in fcc nickel. 2004 , 69,		20
1357	Hydrogen as a temporary alloying element in titanium alloys: thermohydrogen processing. 2004 , 49, 227-245		183
1356	Consequences of plastic strain on the dissolution process of polycrystalline nickel in H ₂ SO ₄ solution. 2004 , 51, 869-873		35
1355	Measurement of the saturated dislocation pinning force in hydrogenated nickel and nickel base alloys. 2004 , 51, 1177-1181		22
1354	Hydrogen-involved tensile and cyclic deformation behavior of low-alloy pressure vessel steel. 2004 , 35, 1477-1486		23
1353	Influence of cyclic strain rate on environmentally assisted cracking behavior of pressure vessel steel in high-temperature water. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 379, 58-71	5-3	13
1352	Hydrogen absorption of titanium in acidic fluoride solutions. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 384, 19-25	5-3	18
1351	Interaction of hydrogen with crack-tip plasticity: effects of constraint on void growth. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 366, 397-411	5-3	42
1350	First principles assessment of ideal fracture energies of materials with mobile impurities: implications for hydrogen embrittlement of metals. 2004 , 52, 4801-4807		162
1349	Hydrogen related failure of steels – a new aspect. 2004 , 20, 940-950		317
1348	Solid Solutions of Hydrogen in Complex Materials. 2004 , 203-291		36
1347	In situ observation of hydrogen-enhanced localized plastic flow in Zr-based bulk metallic glass. 2004 , 58, 2393-2396		11

1346	Hydrogen-Promoted Grain Boundary Embrittlement and Vacancy Activity in Metals: Insights from Ab Initio Total Energy Calculations. 2005 , 46, 756-760	36
1345	Microstructural evolution of both as-irradiated and subsequently deformed microstructures of 316L stainless steel irradiated at 30–60°C at LANSCE. 2005 , 345, 136-145	9
1344	Influence of environment on fatigue mechanisms in high-temperature titanium alloy IMI834. 2005 , 27, 1485-1493	16
1343	Fatigue and damage tolerance behaviour of corroded 2024 T351 aircraft aluminum alloy. 2005 , 43, 121-132	54
1342	Hydrides in Ti: Characterization and effect of applied external stresses. 2005 , 53, 4987-4996	27
1341	Change in the electron structure caused by C, N and H atoms in iron and its effect on their interaction with dislocations. 2005 , 53, 5017-5024	89
1340	Hydrogen embrittlement of work-hardened Ni-Ti alloy in fluoride solutions. 2005 , 26, 101-8	55
1339	An environmental transmission electron microscope for in situ synthesis and characterization of nanomaterials. 2005 , 20, 1695-1707	99
1338	Hydrogen degradation of a boron-bearing steel with 1050 and 1300 MPa strength levels. 2005 , 52, 403-408	108
1337	Observation of hydrogen effects on fatigue crack growth behaviour in an 18Cr-8Ni austenitic stainless steel. 2005 , 132, 99-113	38
1336	Fatigue characteristics of a type 304 austenitic stainless steel in hydrogen gas environment. 2005 , 133, 277-288	28
1335	Hydrogen - Plasticity Interactions: Modelling and Experiments in Hydrogenated Nickel Alloys. 2005 , 16, 151-162	
1334	Mechanisms of Hydrogen Embrittlement of Austenitic Stainless Steels. 2005 , 16, 163-176	2
1333	Dynamic Embrittlement Time-Dependent Quasi-Brittle Intergranular Fracture at High Temperatures. 2005 , 50, 83-97	66
1332	Susceptibility to delayed fracture of alpha-beta titanium alloy in fluoride solutions. 2005 , 47, 1778-1793	16
1331	Micromechanics of Hydrogen Transport and Embrittlement in Pipeline Steels. 2006 , 741	2
1330	Contribution of Hydrogen Embrittlement to SCC Process in Excess Si Type Al-Mg-Si Alloys. 2006 , 47, 1127-1134	14
1329	Effects of hydrogen charge on microscopic fatigue behaviour of annealed carbon steels. 2006 , 29, 1066-1074	38

1328	Influence of the plastic strain on the hydrogen evolution reaction on polycrystalline nickel electrodes in H ₂ S ₀₄ . 2006 , 51, 4716-4727		32
1327	Effect of pre-charged hydrogen on fatigue crack growth of low alloy steel at 288°C. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 420, 279-285	5-3	15
1326	An overview on the influence of the atmosphere environment on ultra-high-cycle fatigue and ultra-slow fatigue crack propagation. 2006 , 28, 1471-1478		41
1325	Austenite and martensite in nitrogen-, carbon- and hydrogen-containing iron alloys: Similarities and differences. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 438-440, 75-79	5-3	15
1324	A brief history of fractography. 2006 , 6, 54-69		32
1323	The Effect of Hydrogen on Fatigue Properties of Metals used for Fuel Cell System. 2006 , 138, 167-195		32
1322	Fracture criterion for hydrogen embrittlement of high strength steel. 2006 , 22, 167-172		37
1321	Effect of grain size on the susceptibility of martensitic steel to hydrogen-related failure. 2006 , 86, 21-29		76
1320	Cross-slip process in fcc nickel with hydrogen in a stacking fault: An atomistic study using the embedded-atom method. 2007 , 75,		18
1319	Coarsening model of cavity nucleation and thin film delamination from single-crystal BaTiO ₃ with proton implantation. 2007 , 75,		4
1318	Fatigue Life and Crack Growth Mechanisms of the Type 316LN Austenitic Stainless Steel in 310°C Deoxygenated Water. 2007 , 44, 1007-1014		17
1317	Carbon, Nitrogen and Hydrogen in Steel: Similarities and Differences in their Effect on Structure and Properties. 2007 , 539-543, 58-65		
1316	Environmental Fatigue Behaviors of SA508 Gr.1a Low Alloy Steel in 310°C Deoxygenated Water. 2007 , 345-346, 1039-1042		4
1315	Hydrogen embrittlement properties of notched-aluminum alloy plates in humid air. 2007 , 57, 74-79		1
1314	The effect of hydrogen charging on the mechanical behaviour of 5083 wrought aluminum alloy. 2007 , 49, 4443-4451		20
1313	Investigation of hydrogen-deformation interactions in Ti-15 titanium alloy using thermal desorption spectroscopy. 2007 , 440, 204-209		16
1312	Mechanism of Hydrogen Embrittlement of Austenitic Steels. 2007 , 539-543, 4249-4254		4
1311	Mechanism of Hydrogen-related Failure I. 2007 , 56, 343-352		13

1310	Progression markings, striations, and crack-arrest markings on fracture surfaces. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 468-470, 74-80 ⁵⁻³	35
1309	Hydrogen-assisted cracking of T-250 maraging steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 471, 34-37	53 16
1308	Effect of hydrogen on electronic structure of fcc iron in relation to hydrogen embrittlement of austenitic steels. 2007 , 204, 4249-4258	24
1307	Cohesive zone modeling of hydrogen-induced stress cracking in 25% Cr duplex stainless steel. 2007 , 57, 615-618	42
1306	First-principles investigation of metal-hydride phase stability: The Ti-H system. 2007 , 76,	56
1305	Why do nickel-titanium archwires fracture intraorally? Fractographic analysis and failure mechanism of in-vivo fractured wires. 2007 , 132, 84-9	25
1304	Modeling of hydrogen-assisted ductile crack propagation in metals and alloys. 2007 , 145, 135-157	47
1303	Role of dynamic strain aging in corrosion fatigue of low-alloy pressure vessel steel in high temperature water. 2007 , 42, 633-639	5
1302	Selective Internal Oxidation as a Mechanism for Intergranular Stress Corrosion Cracking of Ni-Cr-Fe Alloys. 2007 , 38, 1244-1259	57
1301	Effects of Atomic Hydrogen and Flaking on Mechanical Properties of Wheel Steel. 2007 , 38, 1004-1011	5
1300	Mechanical Properties of Super Duplex Stainless Steel 2507 after Gas Phase Thermal Precharging with Hydrogen. 2007 , 38, 2763-2775	39
1299	Influence of stress-strain field on the dissolution process of polycrystalline nickel in H ₂ SO ₄ solution: An original in situ method. 2007 , 52, 7746-7753	14
1298	Asymptotic approach to the constant velocity of hydrogen delamination growth. 2008 , 50, 22-29	1
1297	Dependence of critical cleavage stresses as a function of orientation and temperature in single crystals of Fe-18% Cr-14% Ni-2% Mo austenitic stainless steel containing hydrogen. 2008 , 50, 282-288	5
1296	Reaction of hydrogen with structural materials based on iron. 2008 , 50, 269-272	2
1295	Hydrogen Embrittlement Mechanism in Fatigue of Austenitic Stainless Steels. 2008 , 39, 1327-1339	155
1294	Effect of hydrogen trapping on void growth and coalescence in metals and alloys. 2008 , 40, 115-132	55
1293	Measuring the effect of environment on fatigue crack-wake plasticity in aluminum alloy 2024 using electron backscatter diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 494, 36-46	53 10

1292	The effects of atomic hydrogen and flake on mechanical properties of a tyre steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 491, 164-171	5-3	12
1291	Modelling of hydrogen diffusion and hydrogen induced cracking in supermartensitic and duplex stainless steels. 2008 , 29, 1934-1948		191
1290	Lattice defects dominating hydrogen-related failure of metals. 2008 , 56, 5158-5167		244
1289	Hydrogen embrittlement of 3.5Ni-1.5Cr-0.5Mo steel fastener. 2008 , 15, 431-439		22
1288	Application of hydrogen influenced cohesive laws in the prediction of hydrogen induced stress cracking in 25%Cr duplex stainless steel. 2008 , 75, 2333-2351		61
1287	Low cycle fatigue behaviors of type 316LN austenitic stainless steel in 310°C deaerated water: fatigue life and dislocation structure development. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 476, 248-256	5-3	43
1286	Hydrogen-induced $\delta \rightarrow \epsilon$ transformation and the role of ϵ -martensite in hydrogen embrittlement of austenitic steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 497, 290-294	5-3	56
1285	On the formation of GBF of high-strength steels in the very high cycle fatigue regime. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 497, 408-415	5-3	36
1284	Effect of atomic scale plasticity on hydrogen diffusion in iron: Quantum mechanically informed and on-the-fly kinetic Monte Carlo simulations. 2008 , 23, 2757-2773		46
1283	Effects of Dissolved Hydrogen and Strain Rate on IASCC Behavior in Highly Irradiated Stainless Steels. 2008 , 45, 452-458		6
1282	De Gruyter. 2008 , 8,		1
1281	On the small scale character of the stress and hydrogen concentration fields at the tip of an axial crack in steel pipeline: effect of hydrogen-induced softening on void growth. 2008 , 99, 557-570		10
1280	Hydrogen Transport in a Coupled Elastoplastic-Diffusion Analysis near a Blunting Crack Tip. 2008 , 2, 499-510		13
1279	Fatigue crack growth properties of 6061 aluminum alloy in humid air. 2008 , 58, 456-461		3
1278	Effect of grain size on hydrogen embrittlement properties of 6061 aluminum alloys. 2008 , 58, 139-145		11
1277	Hydrogen Embrittlement Associated with Phase Transformation (Appendix : Assessment of the Susceptibility to Hydrogen-related Failure). 2008 , 57, 301-317		1
1276	Hydrogen-enhanced dislocation activity and vacancy formation during nanoindentation of nickel. 2009 , 80,		30
1275	Hydrogen Effects on Localized Plasticity in SUS310S Stainless Steel Investigated by Nanoindentation and Atomic Force Microscopy. 2009 , 48, 08JB08		17

1274	Comments on A unified model of environment-assisted cracking	2009, 61, 331-334	38
1273	Hydrogen-induced slip localization around a quasi-brittle fatigue crack observed by high-voltage electron microscopy.	2009, 61, 145-148	23
1272	Deformation and damage mechanisms in an Ti alloy in fatigue, dwell-fatigue and creep at room temperature. Influence of internal hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> ,	2009, 507, 132-143	5:3 28
1271	Hydrogen-Assisted Crack Propagation in Austenitic Stainless Steel Fusion Welds.	2009, 40, 2350-2362	34
1270	Hydrogen-Induced Cracking (HIC) of Hardened and Tempered Steel Fastener Used in Space Application.	2009, 9, 420-428	9
1269	Failure of 35NCD16 steel fastener A metallurgical investigation.	2009, 16, 302-308	3
1268	Influence of hydrogen from cathodic protection on the fracture susceptibility of 25%Cr duplex stainless steel Constant load SENT testing and FE-modelling using hydrogen influenced cohesive zone elements.	2009, 76, 827-844	53
1267	Hydrogen permeation resistant glass-ceramic coatings for gamma-titanium aluminide.	2009, 204, 391-397	9
1266	Effects of hydrogen on steady, ductile crack growth: Computational studies.	2009, 46, 4095-4106	12
1265	Hydrogen embrittlement behavior induced by dynamic martensite transformation of Ni superelastic alloy.	2009, 57, 1875-1885	50
1264	Effects of hydrogen on the fracture toughness of a X70 pipeline steel.	2009, 51, 2803-2810	68
1263	The effect of heat treatment and HCF performance on hydrogen trapping mechanism in Timetal LCB alloy.	2009, 468, 77-86	11
1262	Interatomic potentials for hydrogen in Fe based on density functional theory.	2009, 79,	126
1261	Simulation of Stress-Corrosion Cracking by the Cohesive Model.	2009, 417-418, 329-332	4
1260	The role of localized deformation in hydrogen-assisted crack propagation in 21Cr-Ni-Mn stainless steel.	2009, 57, 3795-3809	72
1259	Influence of thermo hydrogen treatment on hot deformation behavior of Ti600 alloy.	2009, 19, 65-71	8
1258	Interaction of Hydrogen Transport and Material Elastoplasticity in Pipeline Steels.	2009, 131,	17
1257	Embrittlement Properties of Aluminum Alloys 7075 and 6061 in High-Pressure Gaseous Hydrogen.	2009, 75, 366-372	4

1256	Current research trends in aluminum alloys for a high-pressure hydrogen gas container. 2010 , 60, 542-547	20
1255	Modelling the effect of hydrogen on ductile tearing resistance of steels. 2010 , 101, 989-996	25
1254	The effect of internal hydrogen on surface slip localisation on polycrystalline AISI 316L stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 5858-5866	5:3 27
1253	Hydrogen Effect against Hydrogen Embrittlement. 2010 , 41, 2548-2562	124
1252	Hydride-Phase Formation and its Influence on Fatigue Crack Propagation Behavior in a Zircaloy-4 Alloy. 2010 , 41, 2816-2828	9
1251	Effects of Strength and Microstructure on Hydrogen-Assisted Crack Propagation in 22Cr-13Ni-5Mn Stainless Steel Forgings. 2010 , 41, 3348-3357	4
1250	Stress Corrosion Cracking of High Strength Steel Fasteners for Space Applications. 2010 , 10, 270-281	1
1249	Microscopic characterization of hydrogen-induced quasi-brittle fatigue fracture in low-strength carbon steel. 2010 , 64, 2416-2419	16
1248	Direct observation of hydrogen-enhanced plasticity in super duplex stainless steel by means of in situ electrochemical methods. 2010 , 62, 242-245	40
1247	Recent advances in the study of structural materials compatibility with hydrogen. 2010 , 22, 1128-35	93
1246	Hydrogen embrittlement susceptibility of a high strength steel X80. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 7252-7260	5:3 92
1245	A statistical, physical-based, micro-mechanical model of hydrogen-induced intergranular fracture in steel. 2010 , 58, 206-226	270
1244	A coupled elastoplastic-transient hydrogen diffusion analysis to simulate the onset of necking in tension by using the finite element method. 2010 , 35, 1506-1514	20
1243	Effect of hydrogen on hot deformation behaviors of TiAl alloys. 2010 , 35, 13322-13328	31
1242	Prediction of crack growth in a nickel-based superalloy under fatigue-oxidation conditions. 2010 , 77, 925-938	40
1241	First-principles assessment of hydrogen absorption into FeAl and Fe ₃ Si: Towards prevention of steel embrittlement. 2010 , 58, 638-648	36
1240	Phase field modeling of defects and deformation. 2010 , 58, 1212-1235	322
1239	First-principles energetics of hydrogen traps in ϵ -Fe: Point defects. 2010 , 58, 4730-4741	130

1238	Recent developments in the study of hydrogen embrittlement: Hydrogen effect on dislocation nucleation. 2010 , 58, 5274-5285	265
1237	Hydrogen-induced intergranular stress corrosion cracking (HI-IGSCC) of 0.35C $\bar{0}$.5Ni $\bar{0}$.5Cr $\bar{0}$.5Mo steel fastener. 2010 , 17, 777-786	12
1236	Hydrogen enhanced crack propagation of SCM440H low-alloy steel under long-term varying load. 2010 , 77, 1963-1974	14
1235	Effect of hydrogen on fatigue crack growth of metals. 2010 , 77, 1926-1940	112
1234	Coupled influence of microstructure and atmosphere environment on fatigue crack path in new generation Al alloys. 2010 , 77, 1941-1952	14
1233	A three-dimensional multiscale model of intergranular hydrogen-assisted cracking. 2010 , 90, 2939-2963	33
1232	Ab initio study of the solubility and kinetics of hydrogen in austenitic high Mn steels. 2010 , 81,	24
1231	Influence of hydrogen content on hot deformation behavior and microstructural evolution of Ti600 alloy. 2010 , 491, 673-678	36
1230	Evaluation of delayed fracture property of outdoor-exposed high strength AISI 4135 steels. 2010 , 52, 3198-3204	27
1229	Electronic effect on hydrogen brittleness of austenitic steels. 2010 , 108, 083723	22
1228	Testing continuum concepts for hydrogen embrittlement in metals using atomistics. 2010 , 18, 045003	34
1227	Hydrogen embrittlement (HE) phenomena and mechanisms. 2011 , 90-130	50
1226	Challenges Toward the Further Strengthening of Sheet Steel. 2011 , 229-240	3
1225	First-principles study on the interaction of H interstitials with grain boundaries in $\bar{0}$ and $\bar{0}$ Fe. 2011 , 84,	150
1224	Energetics of small hydrogen-vacancy clusters in bcc iron. 2011 , 23, 425402	35
1223	Hydrogen hardening effect in heavily deformed single crystal $\bar{0}$ Fe. 2011 ,	17
1222	Analysis of deuterium in V $\bar{0}$ Be5at.% film by atom probe tomography (APT). 2011 , 509, S872-S876	21
1221	Effect of Heat Treatment on the Hydrogen Enhanced Fatigue Crack Propagation of Low Carbon Steel S25C. 2011 , 60, 898-904	3

1220	Finite Element Implementation of an Elastoplastic Constitutive Equation in the Presence of Hydrogen. 2011 , 5, 62-76	2
1219	Function of Hydrogen in Fracture Process. 2011 , 50, 205-211	3
1218	Effects of Hydrogen Diffusion on the Mechanical Properties of Austenite 316L Steel at Ambient Temperature. 2011 , 52, 507-513	41
1217	Study of hydrogen effusion in austenitic stainless steel by time-resolved in-situ measurements using neutron radiography. 2011 , 651, 211-215	9
1216	On the micromechanism of hydrogen-assisted cracking in a single-crystalline ironSilicon alloy thin sheet. 2011 , 64, 537-540	13
1215	Effect of hydrogen-doping on bonding properties of Ti3SiC2. 2011 , 406, 4460-4465	11
1214	Influence of machining-induced martensite on hydrogen-assisted fracture of AISI type 304 austenitic stainless steel. 2011 , 36, 11195-11206	76
1213	Hydrogen effect on fracture toughness of pipeline steel welds, with in situ hydrogen charging. 2011 , 36, 12626-12643	56
1212	Effect of alloying elements on hydrogen environment embrittlement of AISI type 304 austenitic stainless steel. 2011 , 36, 15888-15898	37
1211	Modeling Damage of the Hydrogen Enhanced Localized Plasticity in Stress Corrosion Cracking. 2011 , 20, 831-844	4
1210	Effects of grain boundary and boundary inclination on hydrogen diffusion in a-iron. 2011 , 26, 2735-2743	19
1209	Tensile plastic strain localization in single crystals of austenite steel electrolytically saturated with hydrogen. 2011 , 37, 793-796	16
1208	Binding of multiple H atoms to solute atoms in bcc Fe using first principles. 2011 , 59, 5812-5820	24
1207	Influence of hydrogen and frequency on fatigue crack growth behavior of Cr-Mo steel. 2011 , 168, 101-112	58
1206	Neutron radiography study of hydrogen desorption in technical iron. 2011 , 46, 5171-5175	11
1205	Fatigue crack growth acceleration caused by irreversible hydrogen desorption in high-strength steel and its mechanical condition. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 7729-7738	5-3 14
1204	Effect of hydrogenation on the mechanical property of amorphous Ni90Al10 membranes. 2011 , 36, 9324-9334	14
1203	A nanoscale mechanism of hydrogen embrittlement in metals. 2011 , 59, 1557-1569	149

1202	A Nanoscale Study of Dislocation Nucleation at the Crack Tip in the Nickel-Hydrogen System. 2011 , 42, 340-347		25
1201	Visualization of Hydrogen Diffusion in a Hydrogen-Enhanced Fatigue Crack Growth in Type 304 Stainless Steel. 2011 , 42, 2696-2705		31
1200	Stress Oriented Delayed Cracking Induced by Dynamic Martensitic Transformation in Meta-Stable Austenitic Stainless Steels. 2011 , 82, 6-13		14
1199	A thermo-mechanically-coupled theory accounting for hydrogen diffusion and large elastic-plastic deformations of metals. 2011 , 48, 962-971		32
1198	Hydrogen-enhanced local plasticity at dilute bulk H concentrations: The role of H ₂ interactions and the formation of local hydrides. 2011 , 59, 2969-2980		105
1197	Ab initio study of the modification of elastic properties of Iron by hydrostatic strain and by hydrogen interstitials. 2011 , 59, 4255-4263		39
1196	Constant-load delayed fracture test of atmospherically corroded high strength steels. 2011 , 257, 8275-8281		26
1195	Fatigue crack surface crystallography near crack initiating particle clusters in precipitation hardened legacy and modern Al ₇ Ni ₃ MgCu alloys. 2011 , 33, 1159-1174		52
1194	Analyses of hydrogen distribution around fatigue crack on type 304 stainless steel using secondary ion mass spectrometry. 2011 , 36, 8630-8640		37
1193	In situ analysis of hydrogen behaviour in stainless steels by high energy synchrotron radiation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 1608-1614	5.3	10
1192	Lean-alloyed austenitic stainless steel with high resistance against hydrogen environment embrittlement. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 7688-7695	5.3	18
1191	Mechanism of hydrogen absorption during the exposure of alloy 600-like single-crystals to PWR primary simulated media. 2011 , 414, 386-392		28
1190	Mechanistic and fractographic aspects of stress-corrosion cracking (SCC). 2011 , 3-89		26
1189	Hydrogen Embrittlement of Low Carbon HSLA Steel during Slow Strain Rate Test. 2011 , 197-198, 642-645		2
1188	Atomistic study of the competitive relationship between edge dislocation motion and hydrogen diffusion in alpha iron. 2011 , 26, 1269-1278		26
1187	Hydrogen effects on the plasticity of face centred cubic (fcc) crystals. 2012 , 247-285		13
1186	Effect of H impurity on misfit dislocation in Ni-based single-crystal superalloy: molecular dynamic simulations. 2012 , 21, 026104		6
1185	Metallurgical Failure Analysis-Few Case Studies. 2012 , 710, 695-700		

1184	Effect of inelastic strain on hydrogen-assisted fracture of metals. 2012 , 378-429	4
1183	Novel methods for micromechanical examination of hydrogen and grain boundary effects on dislocations. 2012 , 92, 3216-3230	18
1182	Metallographic and fractographic techniques for characterising and understanding hydrogen-assisted cracking of metals. 2012 , 274-346	19
1181	Modeling hydrogen induced damage mechanisms in metals. 2012 , 209-246	27
1180	Mechanics of modern test methods and quantitative-accelerated testing for hydrogen embrittlement. 2012 , 237-273	4
1179	Hydrogen trapping phenomena in martensitic steels. 2012 , 493-525	14
1178	Hydrogen embrittlement of stainless steels and their welds. 2012 , 592-623	2
1177	Combined Effect of Temper and Hydrogen Embrittlement on Threshold for Hydrogen Induced Fracture in Cr-Mo Steels. 2012 ,	
1176	Effect of strain rate on hydrogen gas evolution behavior during tensile deformation in 6061 and 7075 aluminum alloys. 2012 , 62, 306-312	16
1175	Atomistic simulations of the interactions of hydrogen with dislocations in fcc metals. 2012 , 86,	37
1174	Grain size and grain-boundary effects on diffusion and trapping of hydrogen in pure nickel. 2012 , 60, 6814-6828	233
1173	A new mechanism in hydrogen-enhanced fatigue crack growth behavior of a 1900-MPa-class high-strength steel. 2012 , 177, 141-162	46
1172	Synergistic effects in hydrogen-helium bubbles. 2012 , 24, 265402	46
1171	Effect of Hydrogen Content on Low-Cycle Fatigue Behavior of Zr-Sn-Nb Alloy. 2012 , 41, 1531-1534	4
1170	Effects of hydrogen on fatigue-crack propagation in steels. 2012 , 379-417	4
1169	White structure flaking (WSF) in wind turbine gearbox bearings: effects of Butterflies and white etching cracks (WECs). 2012 , 28, 3-22	159
1168	Experimental investigation of structural defects in deep-drawn austenitic Mn-based TWIP steel. 2012 , 28, 348-353	9
1167	Effects of inclusions on very high cycle fatigue properties of high strength steels. 2012 , 57, 92-114	97

1166	Hydrogen embrittlement of ferritic steels: Observations on deformation microstructure, nanoscale dimples and failure by nanovoiding. 2012 , 60, 5160-5171	212
1165	The role of hydrogen in hydrogen embrittlement fracture of lath martensitic steel. 2012 , 60, 5182-5189	226
1164	Hydrogen diffusion and hydrogen influenced critical stress intensity in an API X70 pipeline steel welded joint [Experiments and FE simulations. 2012 , 37, 11474-11486	97
1163	Application of the electrochemical microcapillary technique to study intergranular stress corrosion cracking of austenitic stainless steel on the micrometre scale. 2012 , 55, 126-132	25
1162	Hydrogen-assisted crack propagation in 304L/308L and 21CrNi9Mn/308L austenitic stainless steel fusion welds. 2012 , 60, 136-144	34
1161	Thermally activated process of homogeneous dislocation nucleation and hydrogen effects: An atomistic study. 2012 , 54, 28-31	13
1160	First principles calculations of hydrogen-induced decrease in the cohesive strength of α -Al ₂ O ₃ single crystals. 2012 , 54, 81-83	2
1159	Origin of hydrogen embrittlement in vanadium-based hydrogen separation membranes. 2012 , 37, 13583-13593	30
1158	Hydrogen environment embrittlement of stable austenitic steels. 2012 , 37, 16231-16246	123
1157	Ab initio study of the interaction of H with substitutional solute atoms in α -Fe: Trends across the transition-metal series. 2012 , 65, 235-238	8
1156	Role of grain boundary and dislocation loop in H blistering in W: A density functional theory assessment. 2012 , 430, 132-136	33
1155	Mobile effect of hydrogen on intergranular decohesion of iron: first-principles calculations. 2012 , 92, 1349-1368	45
1154	Hydrogen-assisted stress corrosion cracking simulation using the stress-modified fracture strain model. 2012 , 26, 2631-2638	11
1153	Analysis of Phase Distribution in Thin Surface Layers Comparable to the Penetration Depth of X-Rays. 2012 , 43, 4028-4042	5
1152	Ab initio parametrized model of strain-dependent solubility of H in δ -Fe. 2012 , 20, 035011	5
1151	Role of Hydrogen in Stress Corrosion Cracking of X-60 Pipeline Steel in Soil Containing Water. 2012 , 68, 1029-1036	9
1150	Diffusion of hydrogen within idealized grains of bcc Fe: A kinetic Monte Carlo study. 2012 , 86,	47
1149	A possible explanation for the contradictory results of hydrogen effects on macroscopic deformation. 2012 , 99-100, 34-43	23

1148	Hydrogen influence on fracture of sheet carbon steel. 2012 , 176, 17-23		6
1147	In situ synchrotron X-ray radiation analysis of hydrogen behavior in stainless steel subjected to continuous heating. 2012 , 47, 5879-5885		3
1146	Effect of Environment on Fatigue Crack Wake Dislocation Structure in Al-Cu-Mg. 2012 , 43, 2275-2292		17
1145	Combined thermal desorption spectroscopy, differential scanning calorimetry, scanning electron microscopy and X-ray diffraction study of hydrogen trapping in cold deformed TRIP steel. 2012 , 60, 2593-2605	102	
1144	Suppression of hydrogen-assisted fatigue crack growth in austenitic stainless steel by cavitation peening. 2012 , 37, 5268-5276		60
1143	Stress corrosion cracking behavior of the wrought magnesium alloy AZ31 under controlled cathodic potentials. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 531, 171-177	5-3	31
1142	Role of ϵ martensite in tensile properties and hydrogen degradation of high-Mn steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 533, 87-95	5-3	74
1141	Hydrogen solubility, diffusivity and trapping in a tempered Fe-Cr martensitic steel under various mechanical stress states. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 534, 384-393	5-3	55
1140	Fatigue crack growth behaviour in austenitic stainless steels subjected to superficial and entire hydrogenation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 548, 118-125	5-3	12
1139	Using an indentation test to evaluate the effect of cavitation peening on the invasion of the surface of austenitic stainless steel by hydrogen. 2012 , 206, 3747-3750		19
1138	Coupling aspects in the simulation of hydrogen-induced stress-corrosion cracking. 2012 , 3, 11-24		29
1137	Steels for bearings. 2012 , 57, 268-435		575
1136	Characterization of hydrogen charging of 2205 duplex stainless steel and its correlation with hydrogen-induced cracking. 2013 , 64, 26-33		13
1135	Effect of electrolytically absorbed hydrogen on Young's modulus of structural steel. 2013 , 48, 491-499		6
1134	Hydrogen induced stress cracking in supermartensitic stainless steels - Stress threshold for coarse grained HAZ. 2013 , 32, 348-359		14
1133	Hydrogen embrittlement of austenitic steels: electron approach. 2013 , 31, 33-50		13
1132	Fully quantum mechanical calculation of the diffusivity of hydrogen in iron using the tight-binding approximation and path integral theory. 2013 , 88,		14
1131	Fatigue Crack Growth under High Pressure of Gaseous Hydrogen in a 15-5PH Martensitic Stainless Steel: Influence of Pressure and Loading Frequency. 2013 , 44, 1320-1330		24

1130	The Relationship Between Crack-Tip Strain and Subcritical Cracking Thresholds for Steels in High-Pressure Hydrogen Gas. 2013 , 44, 248-269			48
1129	How oxidized grain boundaries fail. 2013 , 61, 4707-4713			73
1128	Microstructural characterization on intergranular stress corrosion cracking of Alloy 600 in PWR primary water environment. 2013 , 440, 46-54			36
1127	Effect of hydrogen charging on tensile properties of B-modified Ti-B-Al-V alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 576, 326-336	5-3		10
1126	A critical review of the influence of hydrogen on the mechanical properties of medium-strength steels. 2013 , 31, 85-103			71
1125	Low-cycle fatigue behaviors of two heats of SA508 Gr.1a low alloy steel in 310 °C air and deoxygenated water. Effects of dynamic strain aging and microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 580, 41-50	5-3		14
1124	Effect of microstructure on hydrogen embrittlement of various stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 584, 14-20	5-3		51
1123	Effect of low temperature on hydrogen-assisted crack propagation in 304L/308L austenitic stainless steel fusion welds. 2013 , 77, 210-221			19
1122	Hydrogen-enhanced vacancy embrittlement of grain boundaries in iron. 2013 , 88,			41
1121	The effect of hydrogen atoms on the screw dislocation mobility in bcc iron: A first-principles study. 2013 , 61, 6857-6867			89
1120	Interplay between hydrogen and vacancies in α -Fe. 2013 , 87,			112
1119	Localization of plastic deformation in alloyed α -iron single crystals electrolytically saturated with hydrogen. 2013 , 43, 480-484			2
1118	Atomic mechanism and prediction of hydrogen embrittlement in iron. 2013 , 12, 145-51			298
1117	Relationship between fatigue crack growth behaviour and local hydrogen concentration near crack tip in pipeline steel. 2013 , 50, 26-32			29
1116	Small fatigue crack growth characteristics and fracture surface morphology of low carbon steel in hydrogen gas. 2013 , 179, 147-156			9
1115	Special fracture behavior of nanocrystalline metals driven by hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 577, 105-113	5-3		
1114	Effects of cryogenic and tempered treatment on the hydrogen embrittlement susceptibility of TRIP-780 steels. 2013 , 38, 10694-10703			28
1113	Activation volume and density of mobile dislocations in hydrogen-charged iron. 2013 , 61, 4734-4742			46

1112	Effects of hydrogen on activation volume and density of mobile dislocations in iron-based alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 562, 101-108	5.3	30
1111	Effects of hydrogen on the hot deformation behaviour of Ti ₆ Al ₄ V alloy: Experimental and constitutive model studies. 2013 , 574, 407-414		29
1110	Effect of internal stress on the hydriding kinetics of nanocrystalline Pd thin films. 2013 , 61, 2320-2329		12
1109	Effect of hydrogen on butterfly and white etching crack (WEC) formation under rolling contact fatigue (RCF). 2013 , 306, 226-241		77
1108	Surface coating with a high resistance to hydrogen entry under high-pressure hydrogen-gas environment. 2013 , 38, 10141-10154		41
1107	Molecular dynamics study of the effect of hydrogen on the mechanical properties of tungsten. 2013 , 441, 324-330		17
1106	White etching crack (WEC) investigation by serial sectioning, focused ion beam and 3-D crack modelling. 2013 , 65, 146-160		50
1105	Current understanding of radiation-induced degradation in light water reactor structural materials. 2013 , 50, 213-254		120
1104	Research of 50Mn2V continuous casting slab transverse cracking during its retarded cooling process. 2013 , 30, 61-73		3
1103	Atomistic Investigation of the Role of Grain Boundary Structure on Hydrogen Segregation and Embrittlement in Fe. 2013 , 44, 1365-1375		70
1102	Effects of hydrogen on interaction between dislocations and radiation-induced defects in austenitic stainless steels. 2013 , 442, S735-S739		11
1101	Mechanisms and Kinetics of Environmentally Assisted Cracking: Current Status, Issues, and Suggestions for Further Work. 2013 , 44, 1209-1229		88
1100	Development of a stable high-aluminum austenitic stainless steel for hydrogen applications. 2013 , 38, 5989-6001		24
1099	Studies of Evaluation of Hydrogen Embrittlement Property of High-Strength Steels with Consideration of the Effect of Atmospheric Corrosion. 2013 , 44, 1290-1300		32
1098	Effect of Hydrogen and Magnetic Field on the Mechanical Behavior of High Strength AISI 4340 Steel. 2013 , 22, 1028-1034		1
1097	Hydrogen Embrittlement Behavior of 430 and 445NF Ferritic Stainless Steels. 2013 , 44, 1331-1339		13
1096	3D cohesive modelling of hydrogen embrittlement in the heat affected zone of an X70 pipeline steel. 2013 , 38, 7539-7549		47
1095	Influence of hydrogen content on the tensile properties and fracture of austenitic stainless steel welds. 2013 , 38, 4864-4876		25

1094	Hydrogen-assisted failure in a twinning-induced plasticity steel studied under in situ hydrogen charging by electron channeling contrast imaging. 2013 , 61, 4607-4618		178
1093	Computational modelling of hydrogen embrittlement in welded structures. 2013 , 93, 2680-2700		15
1092	The influence of hydrogen on 3.5NiCrMoV steel studied using the linearly increasing stress test. 2013 , 67, 193-203		47
1091	Effect of hydrogen on the slip resistance of tungsten single crystals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 559, 467-473	5-3	14
1090	Hydrogen-induced cracking behavior of twin boundary in β phase strengthened FeNi based austenitic alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 561, 7-12	5-3	18
1089	Evaluation of stress corrosion cracking susceptibility of stainless steel 304L with surface nanocrystallization by small punch test. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 561, 498-506	5-3	23
1088	Influence of hydrogen on the deformation morphology of vanadium (1 0 0) micropillars in the β phase of the vanadium-hydrogen system. 2013 , 68, 71-74		25
1087	Strain field of interstitial hydrogen atom in body-centered cubic iron and its effect on hydrogen-dislocation interaction. 2013 , 68, 249-252		14
1086	A thermodynamic approach for the development of austenitic steels with a high resistance to hydrogen gas embrittlement. 2013 , 38, 14887-14895		6
1085	Research of the Continuous Casting Slab Transverse Cracking During Retarded Cooling Process. 2013 , 84, 534-544		
1084	An in vivo study on the incidence and location of fracture in round orthodontic archwires. 2013 , 40, 307-12		0
1083	Combined Effect of Temper and Hydrogen Embrittlement on Threshold for Hydrogen-Induced Fracture in Cr-Mo Steels. 2013 , 135,		1
1082	ENVIRONMENTAL FATIGUE OF METALLIC MATERIALS IN NUCLEAR POWER PLANTS A REVIEW OF KOREAN TEST PROGRAMS. 2013 , 45, 929-940		14
1081	Hydrogen-induced change in core structures of {110}[111] edge and {110}[111] screw dislocations in iron. 2013 , 3, 2760		19
1080	The Effect of Hydrogen on the Fatigue Properties of Austenitic Stainless Steel. 2013 , 1545, 1		
1079	Al and Si Influences on Hydrogen Embrittlement of Carbide-Free Bainitic Steel. 2013 , 2013, 1-7		2
1078	Atomistic Study of Hydrogen Effect on Dislocation Nucleation at Crack Tip. 2013 , 15, 1146-1151		8
1077	Model for Plasticity-Enhanced Decohesion Fracture. 2013 , 599-610		

1076 Hydrogen Effects on Cyclic Deformation Behaviour of a Low Alloy Steel. **2013**, 343-354

1075 Hydrogen Dislocation Interactions. **2013**, 13-34

1074 Influence of hydrogen environment on fatigue crack growth in forged Ti-6Al-4V: fractographic analysis. **2013**, 48, 012010 2

1073 Energy Dispersive Synchrotron Diffraction for In-Situ Analyses of Hydrogen Behavior in Steels. **2013**, 3481-3488

1072 Change of hydrogen embrittlement behavior of Al-Zn-Mg-Cu alloy with temper in humid air. **2013**, 63, 57-64 6

1071 Competitive Phenomenon of Hydrogen Trapping and Carbon Segregation in Dislocations Introduced by Drawing or Martensitic Transformation of 0.35 mass% and 0.8 mass% C Steels. **2014**, 100, 1322-1328 3

1070 The Impact of Nb, Ti, Zr, B, V, and Mo on the Hydrogen Diffusion in Four Different AHSS/UHSS Microstructures. **2014**, 85, 336-346 20

1069 Effect of Cr, Mo, and Nb additions on intergranular cohesion of ferritic stainless steel: First-principles determination. **2014**, 23, 037102 6

1068 Creep Behavior of Hydrogenated Zirconium Alloys. **2014**, 23, 3649-3656 21

1067 Formation mechanisms of white etching cracks and white etching area under rolling contact fatigue. **2014**, 228, 1047-1062 18

1066 Effect of Indentation Load on Vickers Hardness of Austenitic Stainless Steel After Hydrogen Charging. **2014**, 2 2

1065 A statistical model of hydrogen-induced fracture of metals. **2014**, 59, 534-538 4

1064 Surface morphology and deuterium retention of tungsten after low- and high-flux deuterium plasma exposure. **2014**, 54, 083014 49

1063 Plastic Deformation Localization of Low Carbon Steel: Hydrogen Effect. **2014**, 1013, 77-83 1

1062 Anomalies in hydrogen enhanced fatigue of a high strength steel. **2014**, 59, 14-22 7

1061 A fracture criterion for the notch strength of high strength steels in the presence of hydrogen. **2014**, 63, 80-93 43

1060 Increase in the local yield stress near surface of austenitic stainless steel due to invasion by hydrogen. **2014**, 39, 6095-6103 23

1059 Hydrogen and aluminium in high-manganese twinning-induced plasticity steel. **2014**, 80, 9-12 36

1058	Hydrogen embrittlement susceptibility of a weld simulated X70 heat affected zone under H ₂ pressure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 597, 29-36	5.3	29
1057	Stress Induce Martensitic Transformations in Hydrogen Embrittlement of Austenitic Stainless Steels. 2014 , 45, 162-178		13
1056	Grain boundary migration of substitutional and interstitial atoms in Iron. 2014 , 69, 105-113		31
1055	Effects of tungsten on the hydrogen embrittlement behaviour of microalloyed steels. 2014 , 82, 380-391		39
1054	Ex situ and in situ characterization of stress corrosion cracking of nickel-base alloys at high temperature. 2014 , 18, 309-323		3
1053	Ductility Loss in Ductile Cast Iron with Internal Hydrogen. 2014 , 45, 1315-1326		10
1052	Hydrogen-assisted decohesion and localized plasticity in dual-phase steel. 2014 , 70, 174-187		270
1051	Mechanisms of hydrogen-enhanced localized plasticity: An atomistic study using Fe as a model system. 2014 , 68, 61-69		135
1050	Hydrogen environment embrittlement of solution treated FeCrNi super alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 607, 71-80	5.3	11
1049	Stress-dependent hardening-to-softening transition of hydrogen effects in nanoindentation of a linepipe steel. 2014 , 39, 1897-1902		29
1048	Cathodic hydrogen charging of zinc. 2014 , 79, 16-20		9
1047	Monovacancy in copper: Trapping efficiency for hydrogen and oxygen impurities. 2014 , 84, 122-128		17
1046	Displacement field induced by a vacancy in nickel and some implications for the solubility of hydrogen. 2014 , 94, 3978-3991		14
1045	Atom probe tomography observation of hydrogen in high-Mn steel and silver charged via an electrolytic route. 2014 , 39, 12221-12229		45
1044	Three-dimensional imaging of hydrogen blister in iron with neutron tomography. 2014 , 78, 14-22		83
1043	Effect of hydrogen gas impurities on the hydrogen dissociation on iron surface. 2014 , 114, 626-635		22
1042	Microstructural Characterization of Hydrogen Induced Cracking in TRIP Steels by EBSD. 2014 , 922, 412-417		1
1041	First-principles studies of hydrogen behavior interacting with oxygen-enriched nanostructured particles in the ODS steels. 2014 , 39, 18506-18519		6

1040	Hydrogenation method based on electrodeposited layers controlling the hydrogen desorption rate. 2014 , 39, 17398-17403		4
1039	High-pressure torsion of palladium: Hydrogen-induced softening and plasticity in ultrafine grains and hydrogen-induced hardening and embrittlement in coarse grains. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 618, 1-8	5.3	17
1038	Hydrogen trapping sites and hydrogen-induced cracking in high strength quenching & partitioning (Q&P) treated steel. 2014 , 39, 13031-13040		103
1037	Effect of hydrogen on the yielding behavior and shear transformation zone volume in metallic glass ribbons. 2014 , 78, 213-221		31
1036	Grain Boundary Contributions to Hydrogen-Affected Plasticity in Ni-201. 2014 , 66, 1383-1389		13
1035	Hydrogen in Metals. 2014 , 2597-2705		17
1034	Hydrogen embrittlement associated with strain localization in a precipitation-hardened FeMnAlC light weight austenitic steel. 2014 , 39, 4634-4646		137
1033	Hydrogen Embrittlement of Ferritic Steels: Deformation and Failure Mechanisms and Challenges in the Oil and Gas Industry. 2014 , 66, 1377-1382		22
1032	SCC in PWRs: Learning from a Bottom-Up Approach. 2014 , 1, 194-210		4
1031	Hydrogen embrittlement of austenitic stainless steels revealed by deformation microstructures and strain-induced creation of vacancies. 2014 , 67, 342-353		132
1030	Tensile behavior of hydrogen-charged 316L stainless steel at elevated temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 595, 165-172	5.3	11
1029	Numerical study of the effect of hydrogen on the crack propagation behavior of single crystal tungsten. 2014 , 89, 1096-1100		10
1028	Effects of hydrogen on tensile properties and fracture surface morphologies of Type 316L stainless steel. 2014 , 39, 3542-3551		62
1027	Effects of precipitated helium, deuterium or alloy elements on glissile motion of dislocation loops in FeCrW ferritic alloy. 2014 , 455, 162-166		5
1026	Low cycle fatigue behavior of alloy 690 in simulated PWR water and hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 611, 37-44	5.3	16
1025	The effect of nanosized (Ti,Mo)C precipitates on hydrogen embrittlement of tempered lath martensitic steel. 2014 , 74, 244-254		146
1024	The role of induced β -martensite on the hydrogen-assisted fatigue crack growth of austenitic stainless steels. 2014 , 39, 10293-10302		31
1023	Segregation of hydrogen to defects in nickel using first-principles calculations: The case of self-interstitials and cavities. 2014 , 614, 211-220		38

1022	In-situ Studies with Photons, Neutrons and Electrons Scattering II. 2014 ,		
1021	Dislocation interactions with grain boundaries. 2014 , 18, 227-243		201
1020	Graphene coating as a protective barrier against hydrogen embrittlement. 2014 , 39, 11810-11817		32
1019	Mechanical properties and fracture behavior of hydrogen charged AHSS/UHSS grades at high- and low strain rate tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 590, 360-367	5-3	71
1018	Hydrogen-Induced Cracking. 2014 , 213-262		0
1017	Effects of hydrogen gas pressure and test frequency on fatigue crack growth properties of low carbon steel in 0.1-90 MPa hydrogen gas. 2014 , 80, SMM0254-SMM0254		22
1016	Fatigue-Life and Leak-Before-Break Assessments of Cr-Mo Steel Pressure Vessels With High-Pressure Gaseous Hydrogen. 2014 ,		2
1015	Impact of Mn on the solution enthalpy of hydrogen in austenitic Fe-Mn alloys: a first-principles study. 2014 , 35, 2239-44		6
1014	Hydrogen as an Indicator of High-cycle Fatigue. 2015 , 13, 138-143		4
1013	Modeling of the plasticity of microstructured and nanostructured materials. 2015 , 1, 405-409		1
1012	Influence of interstitial carbon, nitrogen, and hydrogen on the plasticity and brittleness of steel. 2015 , 45, 747-753		6
1011	Tearing Resistance Properties of Cr-Mo Steels with Internal Hydrogen Determined by the Potential Drop Method. 2015 , 46, 5626-5637		1
1010	Suppression of hydrogen invasion into austenitic stainless steel by means of cavitation peening. 2015 , 81, 14-00638-14-00638		2
1009	Multiscale Modeling of Hydrogen Embrittlement. 2015 , 223-249		
1008	Application of Rheological Model of Material with Microdefects and Nanodefects with Hydrogen in the Case of Cyclic Loading. 2015 , 651-653, 592-597		1
1007	Atmospheric Hydrogen Behavior in SCM435 Steel Associated with Hydrogen Embrittlement. 2015 , 79, 89-93		
1006	Evaluation of hydrogen content in the surface layer of austenitic stainless steel by means of micro-indentation test with a spherical indenter. 2015 , 81, 14-00426-14-00426		
1005	Characterization of Hydrogen-Related Fracture Behavior in As-Quenched Low-Carbon Martensitic Steel and Tempered Medium-Carbon Martensitic Steel. 2015 , 46, 5685-5696		43

1004	. 2015,		14
1003	Role of Dynamic Interactions between Hydrogen and Strain-induced Martensite Transformation in Hydrogen Embrittlement of Type 304 Stainless Steel. 2015, 55, 1772-1780		6
1002	Microstructural effects induced by laser shock peening for mitigation of stress corrosion cracking. 2015,		0
1001	Comparative molecular dynamics study of fcc-Al hydrogen embrittlement. 2015, 98, 40-49		16
1000	Analysis of Tribological Processes in Components of Massive Roller Bearings. 2015, 220-221, 319-323		
999	Recent advances on hydrogen embrittlement of structural materials. 2015, 196, 223-243		94
998	The role of hydrogen in hardening/softening steel: Influence of the charging process. 2015, 107, 46-49		64
997	The description of deformation and destruction of materials containing hydrogen by means of rheological model. 2015, 1, 305-314		1
996	Critical Assessment 17: Mechanisms of hydrogen induced cracking in pipeline steels. 2015, 31, 1673-1680		36
995	Fatigue of Clip Connectors for Offshore Drilling Risers under the Combined Influence of High Mean Stress and Biaxial Tension. 2015, 133, 90-101		0
994	Multiscale description of dislocation induced nano-hydrides. 2015, 89, 50-59		21
993	Clustering of O, X, Y (Ag, Al, Ga, Sn, Sc, Zn, Zr) point defects in hexagonal Ti: Formation mechanism and ductility variations. 2015, 154, 137-143		11
992	Microstructural properties controlling hydrogen environment embrittlement of cold worked 316 type austenitic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> 2015, 628, 252-261	5-3	32
991	The dual role of coherent twin boundaries in hydrogen embrittlement. 2015, 6, 6164		127
990	Effect of internal hydrogen on very high cycle fatigue of precipitation-strengthened steel SUH660. 2015, 70, 406-416		
989	Effect of applied potential on fatigue crack propagation behavior of Fe24Mn steel in seawater. 2015, 21, 14-21		14
988	Cracks in Martensite Plates as Hydrogen Traps in a Bearing Steel. 2015, 46, 665-673		13
987	Corrosion fatigue crack growth behavior of pipeline steel under underload-type variable amplitude loading schemes. 2015, 96, 159-169		42

986	Effects of hydrogen-altered yielding and work hardening on plastic-zone evolution: A finite-element analysis. 2015 , 40, 9825-9837		16
985	Factors affecting hydrogen-assisted cracking in a commercial tempered martensitic steel: Mn segregation, MnS, and the stress state around abnormal cracks. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 640, 72-81	5.3	25
984	Ductility loss of 7075 aluminum alloys affected by interaction of hydrogen, fatigue deformation, and strain rate. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 642, 194-203	5.3	18
983	The interaction of dislocations and hydrogen-vacancy complexes and its importance for deformation-induced proto nano-voids formation in α -Fe. 2015 , 74, 175-191		104
982	Rheological Model of Materials with Defects Containing Hydrogen. 2015 , 651-653, 604-609		4
981	Capacity of pitting corroded pipes under hydrogen assisted cracking. 2015 , 40, 9388-9399		13
980	Tensile properties of precracked tempered martensitic steel specimens tested at ultralow strain rates in high-pressure hydrogen atmosphere. 2015 , 95, 260-268		12
979	WS2 nanoadditized lubricant for applications affected by hydrogen embrittlement. 2015 , 5, 40678-40687		14
978	Observations of the effect of varying Hoop stress on fatigue failure and the formation of white etching areas in hydrogen infused 100Cr6 steel rings. 2015 , 77, 128-140		14
977	The environment-induced cracking of as-cold rolled Ni ₃ (Si,Ti) and Ni ₃ (Si,Ti) with 2Mo in sodium chloride solutions. 2015 , 639, 504-510		1
976	Numerical modeling of hydrogen diffusion in metals accounting for large deformations. 2015 , 40, 15227-15235		12
975	The environment-induced cracking of as-annealed Ni ₃ (Si,Ti) and Ni ₃ (Si,Ti) with 2Mo in sodium chloride solutions. 2015 , 10,		
974	The influence of hydrogen on the mechanical and fracture properties of some martensitic advanced high strength steels studied using the linearly increasing stress test. 2015 , 99, 98-117		86
973	Role of δ characteristic on the hydrogen embrittlement susceptibility of Fe-Ni-Cr alloys. 2015 , 101, 75-83		18
972	Hydrogen embrittlement in high interstitial alloyed 18Cr10Mn austenitic stainless steels. 2015 , 40, 13635-13642		17
971	Critical grain size to limit the hydrogen-induced ductility drop in a metastable austenitic steel. 2015 , 40, 10697-10703		23
970	Effects of grain size on hydrogen embrittlement in a Fe-22Mn-0.6C TWIP steel. 2015 , 40, 10687-10696		76
969	Evaluation of hydrogen trapping mechanisms during performance of different hydrogen fugacity in a lean duplex stainless steel. 2015 , 648, 601-608		28

968	SIMS and TEM investigation of hydrogen trapping on implantation defects in a nickel-based superalloy. 2015 , 466, 120-133	20
967	Evolution of weld metal microstructure in shielded metal arc welding of X70 HSLA steel with cellulosic electrodes: A case study. 2015 , 107, 317-326	30
966	Hydrogen embrittlement in nickel, visited by first principles modeling, cohesive zone simulation and nanomechanical testing. 2015 , 40, 16892-16900	69
965	Effect of hydrogen on degradation mechanism of zirconium: A molecular dynamics study. 2015 , 466, 172-178	13
964	Effect of H ₂ /CO ₂ partial pressure ratio on the tensile properties of X80 pipeline steel in the absence and presence of water. 2015 , 40, 11917-11924	9
963	Effects of hydrogen on the mechanical response of Uranium. 2015 , 465, 737-745	9
962	Perspectives on hydrogen uptake, diffusion and trapping. 2015 , 40, 16961-16970	82
961	Prediction of diffusion assisted hydrogen embrittlement failure in high strength martensitic steels. 2015 , 85, 143-159	17
960	Multi-scale simulation of hydrogen influenced critical stress intensity in high Co/Ni secondary hardening steel. 2015 , 87, 501-506	15
959	Improved resistance to hydrogen embrittlement in a high-strength steel by quenching/Partitioning/tempering treatment. 2015 , 97, 21-24	66
958	Hydrogen diffusivities as a measure of relative dislocation densities in palladium and increase of the density by plastic deformation in the presence of dissolved hydrogen. 2015 , 82, 266-274	40
957	Suppression Mechanism of Strain-age-hardening in Carbon Steel Associated with Hydrogen Uptake. 2016 , 56, 1656-1661	5
956	Effect of Hydrogen and Strain-Induced Martensite on Mechanical Properties of AISI 304 Stainless Steel. 2016 , 6, 169	16
955	Influence of Hydrogen on Local Mechanical Properties of Pure Fe with Different Dislocation Densities Investigated by Electrochemical Nanoindentation. 2016 , 56, 2298-2303	2
954	Stress corrosion cracking of Alloy 600. 2016 , 325-353	5
953	Electrochemical Nanoindentation Study on Influence of Hydrogen on Local Mechanical Properties of Fcc Metals at Slow Strain Rate. 2016 , 56, 418-423	12
952	Effect of hydrogen on plastic strain localization and fracture of steels. 2016 , 116, 012024	0
951	Competitive Phenomenon of Hydrogen Trapping and Carbon Segregation in Dislocations Introduced by Drawing or Martensitic Transformation of 0.35 mass% and 0.8 mass% C Steels. 2016 , 56, 359-365	6

950	Hydrogen embrittlement of DP-1000 flat steel sheet: Influence of mechanical properties, specimen geometry, pre-damaging and electrolytically zinc galvanizing. 2016 , 67, 239-250		12
949	Influence of hydrogen on formability and bendability of DP1180 steel for car body application. 2016 , 159, 012010		3
948	The effect of hydrogen on strain hardening and fracture mechanism of high-nitrogen austenitic steel. 2016 , 140, 012005		2
947	Intergranular oxidation of Ni-based Alloy 600 in a simulated PWR primary water environment. 2016 , 108, 125-133		40
946	Microstructure, deformation mechanisms and influence of hydrogen on tensile properties of the Co based super alloy DIN 2.4711/UNS N30003. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 662, 36-45	5:3	2
945	Effect of hydrogen on mechanical properties of heat affected zone of a reactor pressure vessel steel grade. 2016 , 60, 623-638		6
944	The effect of residual stress on the Preferential Intergranular Oxidation of Alloy 600. 2016 , 111, 494-507		54
943	Atomistic studies of hydrogen effects on grain boundary structure and deformation response in FCC Ni. 2016 , 122, 92-101		30
942	Small crack growth model from low to very high cycle fatigue regime for internal fatigue failure of high strength steel. 2016 , 93, 406-414		31
941	Critical assessment of hydrogen effects on the slip transmission across grain boundaries in -Fe. 2016 , 472, 20150617		16
940	Fatigue propagation of short and long cracks in gaseous hydrogen environment in 3.5NiCrMoV steel. 2016 , 69, 29-34		2
939	Hydrogen-induced softening in nanocrystalline Ni investigated by nanoindentation. 2016 , 96, 3442-3450		6
938	Measurement of local mechanical properties using multiple indentations by a special conical indenter and error analysis. 2016 , 31, 259-273		1
937	A review on diffusion modelling in hydrogen related failures of metals. 2016 , 66, 577-595		24
936	A probe into low-temperature stress corrosion cracking of 304L stainless steel by scanning vibrating electrode technique. 2016 , 51, 358-364		12
935	Mechanical characterisation of hydrogen-induced quasi-cleavage in a metastable austenitic steel using micro-tensile testing. 2016 , 113, 176-179		21
934	Quantitative characterization of cleavage and hydrogen-assisted quasi-cleavage fracture surfaces with the use of confocal laser scanning microscopy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 665, 35-46	5:3	27
933	Sensitivity analysis of a 2D cohesive model for hydrogen embrittlement of AISI 4130. 2016 , 167, 101-111		11

932	The Dislocation Mechanism of Stress Corrosion Embrittlement in Ti-6Al-2Sn-4Zr-6Mo. 2016 , 47, 282-292	10
931	The mechanism of hydrogen embrittlement in intercritically annealed medium Mn TRIP steel. 2016 , 113, 1-10	101
930	State of 3-D micro-damage in hydrogen redistributed regions of precharged high strength aluminium alloy. 2016 , 111, 26-38	7
929	An updated review: white etching cracks (WECs) and axial cracks in wind turbine gearbox bearings. 2016 , 32, 1133-1169	106
928	Experimental observation of the dislocation walls in heterostructures with two interfaces: Ge/Ge _{0.5} Si _{0.5} 10 nm/Si(001) as an example. 2016 , 96, 361-366	1
927	Effect of hydrogen on tensile behavior of low alloy steel in the regime of dynamic strain ageing. 2016 , 2, 3399-3406	9
926	Coupled hydrogen diffusion simulation using a heat transfer analogy. 2016 , 115-116, 360-369	31
925	Hydrogen Embrittlement: Theories. 2016 , 1785-1800	1
924	Hydrogen Embrittlement: Mechanisms. 2016 , 1768-1784	2
923	Effect of Hydrogen on the Fretting Fatigue Properties of Metals. 2016 , 427-437	
922	Towards a unified and practical industrial model for prediction of hydrogen embrittlement and damage in steels. 2016 , 2, 604-611	22
921	Failure of mounting bolt of helicopter main gearbox support strut. 2016 , 70, 351-363	8
920	Atomistic investigation of the influence of hydrogen on dislocation nucleation during nanoindentation in Ni and Pd. 2016 , 116, 364-369	21
919	Unveiling the Origin of Work Hardening Behavior in an Ultrafine-Grained Manganese Transformation-Induced Plasticity Steel by Hydrogen Investigation. 2016 , 47, 4362-4367	3
918	A New Venue Toward Predicting the Role of Hydrogen Embrittlement on Metallic Materials. 2016 , 47, 5409-5422	7
917	Abnormal effect of nitrogen on hydrogen gas embrittlement of austenitic stainless steels at low temperatures. 2016 , 41, 13777-13785	25
916	Effect of strain rate on hydrogen embrittlement susceptibility of twinning-induced plasticity steel pre-charged with high-pressure hydrogen gas. 2016 , 41, 15362-15372	54
915	Effects of Low Temperature on Hydrogen-Assisted Crack Growth in Forged 304L Austenitic Stainless Steel. 2016 , 47, 4334-4350	13

914	Hydrogenated vacancies lock dislocations in aluminium. 2016 , 7, 13341		88
913	Experimental verification of the hydrogen concentration around a crack tip using spot X-ray diffraction. 2016 , 41, 23188-23195		5
912	Molecular dynamics simulation of effect of hydrogen atoms on crack propagation behavior of β Fe. 2016 , 380, 4049-4056		8
911	The impact of hydrogen on the formability of AHSS in Nakajima tests. 2016 ,		2
910	Micromechanical characterisation of weld metal susceptibility to hydrogen-assisted cold cracking using instrumented indentation. 2016 , 60, 883-897		4
909	Influence of hydrogen on the localization of plastic strain in low-carbon steel during electrolytic saturation. 2016 , 46, 107-111		0
908	Hydrogen influence on generalized stacking fault energies of Zr {0001} basal plane: a first-principles study. 2016 , 6, 54371-54376		3
907	Hydrogen induced amorphisation around nanocracks in aluminium. 2016 , 161, 40-54		11
906	Mechanical characterisation of microstructural evolution in 304 stainless steel subjected to high-pressure torsion with and without hydrogen pre-charging. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 661, 87-95	5:3	9
905	A review of hydrogen embrittlement of martensitic advanced high-strength steels. 2016 , 34, 153-186		80
904	Tensile stress and plastic deformation in aluminum induced by aqueous corrosion. 2016 , 115, 434-441		14
903	Environmentally Assisted Cracking of Alloy 7050-T7451 Exposed to Aqueous Chloride Solutions. 2016 , 47, 1367-1377		3
902	Pressure Cycle Testing of CrMo Steel Pressure Vessels Subjected to Gaseous Hydrogen. 2016 , 138,		19
901	Multiphysics Modeling of the Role of Iodine in Environmentally Assisted Cracking of Zirconium via Pellet-Clad Interaction. 2016 , 72, 978-988		3
900	Ab initio modelling of the interaction of H interstitials with grain boundaries in bcc Fe. 2016 , 114, 1502-1512		10
899	Investigation of hydrogen assisted cracking in acicular ferrite using site-specific micro-fracture tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 651, 859-868	5:3	15
898	A uniform hydrogen degradation law for high strength steels. 2016 , 157, 56-71		44
897	FE analysis of hydrogen diffusion around a crack tip in an austenitic stainless steel. 2016 , 41, 6053-6063		28

896	Hydrogen embrittlement in bearing steels. 2016 , 32, 1184-1193		14
895	Critical assessment 19: mechanisms of hydrogen induced cracking in pipeline steels. 2016 , 32, 1-8		3
894	Multiscale modeling of hydrogen enhanced homogeneous dislocation nucleation. 2016 , 107, 144-151		18
893	Effect of hydrogen environment on the separation of Fe grain boundaries. 2016 , 107, 279-288		70
892	Hydrogen diffusion in ultrafine-grained palladium: Roles of dislocations and grain boundaries. 2016 , 107, 168-177		48
891	The effect of phase transformation in the plastic zone on the hydrogen-assisted fatigue crack growth of 301 stainless steel. 2016 , 112, 134-141		8
890	The tolerance of Ti ₃ SiC ₂ to hydrogen-induced embrittlement: A first principles calculation. 2016 , 166, 93-96		4
889	About the fatigue crack propagation threshold of metals as a design criterion [A review]. 2016 , 153, 190-243		133
888	Hydrogen Embrittlement of Industrial Components: Prediction, Prevention, and Models. 2016 , 72, 943-961		79
887	Hydrogen degradation effects on mechanical properties in T24 weld microstructures. 2016 , 60, 201-216		10
886	Numerical Modelling of Hydrogen Assisted Cracking in Steel Welds. 2016 , 383-439		3
885	Positive influence of hydrogen on the hot workability and dynamic recrystallization of a TiAl based alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 656, 151-164	5-3	24
884	Distribution and transport of hydrogen in the lithospheric mantle: A review. 2016 , 240-243, 402-425		127
883	Interactions of hydrogen with the iron and iron carbide interfaces: a ReaxFF molecular dynamics study. 2016 , 18, 761-71		40
882	Traction-separation relationships for hydrogen induced grain boundary embrittlement in nickel via molecular dynamics simulations. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 650, 354-364	5-3	29
881	Hydrogen and vacancy clustering in zirconium. 2016 , 102, 56-69		27
880	Influence of trap connectivity on H diffusion: Vacancy trapping. 2016 , 103, 334-340		29
879	Surface versus internal fatigue crack initiation in steel: Influence of mean stress. 2016 , 82, 437-448		17

878	Comparative study on the stress corrosion cracking of X70 pipeline steel in simulated shallow and deep sea environments. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 685, 145-153	5-3	53
877	Fracture toughness and hydrogen embrittlement susceptibility on the interface of clad steel pipes with and without a Ni-interlayer. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 685, 87-94	5-3	7
876	Improved resistance to hydrogen embrittlement by tailoring the stability of retained austenite. 2017 , 33, 1497-1504		4
875	The Effect of Absorbed Hydrogen on the Corrosion of Steels: Review, Discussion, and Implications. 2017 , 73, 426-436		20
874	Notched-tensile properties under high-pressure gaseous hydrogen: Comparison of pipeline steel X70 and austenitic stainless type 304L, 316L steels. 2017 , 42, 8075-8082		15
873	Hydrogen Embrittlement of Steels: Vacancy Induced Damage and Nano-Voiding Mechanisms. 2017 , 73, 437-447		11
872	Method of Evaluating Delayed Fracture Susceptibility of Tempered Martensitic Steel Showing Quasi-Cleavage Fracture. 2017 , 48, 666-677		15
871	Hydrogen-assisted failure in Ni-based superalloy 718 studied under in situ hydrogen charging: The role of localized deformation in crack propagation. 2017 , 128, 365-374		86
870	Effects of grain size and deformation temperature on hydrogen-enhanced vacancy formation in Ni alloys. 2017 , 128, 218-226		42
869	Effect of local stress on hydrogen segregation at grain boundaries in metals. 2017 , 196, 123-127		13
868	Effect of quenching and tempering process on sulfide stress cracking susceptibility in API-5CT-C110 casing steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 688, 378-387	5-3	27
867	Influence of hydrogen on plasticity around the crack tip in high strength steels. 2017 , 176, 116-125		10
866	Fracture toughness of hydrogen charged as-quenched ultra-high-strength steels at low temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 688, 190-201	5-3	14
865	Atomistic study of hydrogen embrittlement during cyclic loading: Quantitative model of hydrogen accumulation effects. 2017 , 42, 4571-4578		22
864	Effect of hydrogenation on mechanical properties and tensile fracture mechanism of a high-nitrogen austenitic steel. 2017 , 52, 4224-4233		6
863	Effect of Dynamic Change in Strain Rate on Mechanical and Stress Corrosion Cracking Behavior of a Mild Steel. 2017 , 26, 2619-2631		0
862	Hydrogen embrittlement of 3-D printing manufactured austenitic stainless steel part for hydrogen service. 2017 , 130, 87-90		30
861	Synergistic action of hydrogen and stress concentration on the fatigue properties of X80 pipeline steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 700, 321-330	5-3	23

860	Hydrogen influence on some advanced high-strength steels. 2017 , 125, 114-138	61
859	A review of cohesive zone modelling as an approach for numerically assessing hydrogen embrittlement of steel structures. 2017 , 375,	21
858	Isotopic tracing of hydrogen transport and trapping in nuclear materials. 2017 , 375,	7
857	Lattice discontinuities affecting the generation and annihilation of diffusible hydrogen and vice versa. 2017 , 375,	5
856	Hydrogen-enhanced fatigue crack growth in steels and its frequency dependence. 2017 , 375,	12
855	Role of lattice strain and texture in hydrogen embrittlement of 18Ni (300) maraging steel. 2017 , 42, 14786-14793	23
854	The effect of carbon on hydrogen embrittlement in stable Cr-Ni-Mn-N austenitic stainless steels. 2017 , 124, 63-70	24
853	Efficient approach for cohesive zone based three-dimensional analysis of hydrogen-assisted cracking of a circumferentially notched round tensile specimen. 2017 , 42, 15943-15955	7
852	A phase field model for simulating the stress corrosion cracking initiated from pits. 2017 , 125, 87-98	45
851	Material performance of age-hardened beryllium-copper alloy, CDA-C17200, in a high-pressure, gaseous hydrogen environment. 2017 , 42, 16887-16900	14
850	Influence of hydrogen pressure on fatigue properties of X80 pipeline steel. 2017 , 42, 15669-15678	26
849	Microstructural and crystallographic features of hydrogen-related fracture in lath martensitic steels. 2017 , 33, 1524-1532	27
848	Energetics of Hydrogen Segregation to Fe Grain Boundaries for Modeling Stress Corrosion Cracking. 2017 , 69, 1398-1403	4
847	Hydrogen redistribution under stress-induced diffusion and corresponding fracture behaviour of a structural steel. 2017 , 33, 1539-1547	12
846	Hydrogen-enhanced orientation dependence of stress relaxation and strain-aging in Hadfield steel single crystals. 2017 , 136, 101-105	11
845	Unified evaluation of hydrogen-induced crack growth in fatigue tests and fracture toughness tests of a carbon steel. 2017 , 103, 223-233	27
844	Hydrogen effects on mechanical properties of 18%Cr ferritic stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 700, 331-337	5-3 13
843	Alloy and composition dependence of hydrogen embrittlement susceptibility in high-strength steel fasteners. 2017 , 375,	10

842	Hydrogen in Ti and Zr alloys: industrial perspective, failure modes and mechanistic understanding. 2017 , 375,	6
841	Mechanisms of hydrogen embrittlement in steels: discussion. 2017 , 375,	10
840	Resistance of CoCrFeMnNi high-entropy alloy to gaseous hydrogen embrittlement. 2017 , 135, 54-58	113
839	Characteristics of hydrogen-assisted intergranular fatigue crack growth in interstitial-free steel: role of plastic strain localization. 2017 , 206, 123-130	16
838	Experimental measurement of out-of-plane displacement in crack propagation under gaseous hydrogen. 2017 , 42, 10568-10578	15
837	The influence of calcareous deposits on hydrogen uptake and embrittlement of API 5CT P110 steel. 2017 , 118, 178-189	19
836	A coupled diffusion and cohesive zone modelling approach for numerically assessing hydrogen embrittlement of steel structures. 2017 , 42, 11980-11995	44
835	Study on interactions of an edge dislocation with vacancy-H complex by atomistic modelling. 2017 , 92, 31-44	40
834	Material Influence on Mitigation of Stress Corrosion Cracking Via Laser Shock Peening. 2017 , 139,	5
833	Softening and hardening of yield stress by hydrogen solute interactions. 2017 , 97, 400-418	22
832	FE simulation of the influence of plastic strain on hydrogen distribution during an U-bend test. 2017 , 120, 214-224	27
831	Hydrogen-vacancy-dislocation interactions in Fe. 2017 , 25, 025001	19
830	Effect of hydrogen on the mechanical properties of alloy 945X (UNS N09945) and influence of microstructural features. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 684, 423-434	5-3 18
829	Effects of residual stresses on hydrogen trapping in duplex stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 684, 64-70	5-3 13
828	A discrete dislocation analysis of hydrogen-assisted mode-I fracture. 2017 , 105, 67-79	9
827	Comprehensive Understanding of Ductility Loss Mechanisms in Various Steels with External and Internal Hydrogen. 2017 , 48, 5717-5732	25
826	Electroplating of reduced-graphene oxide on austenitic stainless steel to prevent hydrogen embrittlement. 2017 , 42, 27428-27437	15
825	The effect of sulfate-reducing bacteria on hydrogen permeation of X80 steel under cathodic protection potential. 2017 , 42, 27206-27213	14

824	Cohesive zone modelling of hydrogen induced cracking on the interface of clad steel pipes. 2017 , 42, 28622-28634	17
823	Effect of environment's aggressiveness on the corrosion damage evolution and mechanical behavior of AA 2024-T3. 2017 , 40, 1551-1561	5
822	Mechanical property and hydrogen permeability of ultrafine-grained PdAg alloy processed by high-pressure torsion. 2017 , 42, 24176-24182	7
821	Effect of cathodic hydrogen charging on the wear behavior of 5754 Al alloy. 2017 , 390-391, 295-301	7
820	Quantitative evaluation of hydrogen atoms trapped at single vacancies in tungsten using positron annihilation lifetime measurements: Experiments and theoretical calculations. 2017 , 496, 9-17	7
819	Hydrogen enhances strength and ductility of an equiatomic high-entropy alloy. 2017 , 7, 9892	98
818	First-principles calculations of hydrogen interactions with nickel containing a monovacancy and divacancies. 2017 , 4, 076505	4
817	Subcritical crack growth and crack tip driving forces in relation to material resistance. 2017 , 35, 251-265	4
816	Hydrogen susceptibility of nano-sized oxide dispersed austenitic steel for fusion reactor. 2017 , 121, 105-110	8
815	Laser Shock Peening for Suppression of Hydrogen-Induced Martensitic Transformation in Stress Corrosion Cracking. 2017 , 139,	8
814	Molecular dynamics study of effect of hydrogen atoms on mechanical properties of β Fe nanowires. 2017 , 381, 3222-3227	5
813	Novel Methods for Prevention of Hydrogen Embrittlement in Iron. 2017 , 7, 16927	7
812	A study of hydrogen cracking in metals by the acoustoelasticity method. 2017 ,	3
811	Crystallographic study of hydrogen-induced twin boundary separation in type 304 stainless steel under cyclic loading. 2017 , 129, 205-213	13
810	Fracto-surface mobility mechanism in high-strength steel wires. 2017 , 186, 410-422	6
809	Numerical simulation of hydrogen embrittlement and local triaxiality effects in notched specimens. 2017 , 90, 294-302	15
808	Influence of hydrogen on dislocation self-organization in Ni. 2017 , 135, 96-102	38
807	Finite element analysis of hydrogen diffusion/plasticity coupled behaviors of low-alloy ferritic steel at large strain. 2017 , 42, 20324-20335	10

806	A coupled model between hydrogen diffusion and mechanical behavior of superelastic NiTi alloys. 2017 , 26, 075001	10
805	Slow Strain Rate Testing for Hydrogen Embrittlement Susceptibility of Alloy 718 in Substitute Ocean Water. 2017 , 26, 2337-2345	7
804	Some fractographic contributions to understanding fatigue crack growth. 2017 , 104, 12-26	34
803	Modeling and prediction of stress corrosion cracking of pipeline steels. 2017 , 707-748	7
802	Deuterium supersaturation in low-energy plasma-loaded tungsten surfaces. 2017 , 57, 016026	27
801	Atomistic simulation of hydrogen-assisted ductile-to-brittle transition in Iron. 2017 , 127, 211-221	23
800	Influence of frequency and wave form on S-N fatigue of commercial austenitic stainless steels with different nickel contents in inert gas and in high pressure gaseous hydrogen. 2017 , 96, 67-77	8
799	Hydrogen migration and hydrogen-dislocation interaction in austenitic steels and titanium alloy in relation to hydrogen embrittlement. 2017 , 42, 2424-2433	24
798	Compatible strain evolution in two phases due to epsilon martensite transformation in duplex TRIP-assisted stainless steels with high hydrogen embrittlement resistance. 2017 , 88, 53-69	50
797	The mutual effects of hydrogen and microstructure on hardness and impact energy of SMA welds in X65 steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 679, 87-94	53 13
796	Elastic Property Dependence on Mobile and Trapped Hydrogen in Ni-201. 2017 , 69, 45-50	6
795	Accelerated test for evaluation of intergranular stress corrosion cracking initiation characteristics of non-sensitized 316 austenitic stainless steel in simulated pressure water reactor environment. 2017 , 115, 106-117	47
794	Effect of hydrogen on dislocation structure and strain-induced martensite transformation in 316L stainless steel. 2017 , 7, 27840-27845	5
793	The effect of pearlite on the hydrogen-induced ductility loss in ductile cast irons. 2017 , 843, 012012	3
792	Molecular Statics Simulation of the Effect of Hydrogen Concentration on {112} Edge Dislocation Mobility in Alpha Iron. 2017 , 57, 2058-2064	15
791	The Effect of Cold Rolling on the Hydrogen Susceptibility of 5083 Aluminum Alloy. 2017 , 7, 451	9
790	Numerical Investigation of the Role of Volumetric Transformation Strain on the Relaxation Stress and the Corresponding Hydrogen Interstitial Concentration in Niobium Matrix. 2017 , 2017, 1-7	1
789	Finite element analysis of hydrogen effects on superelastic NiTi shape memory alloys: Orthodontic application. 2018 , 29, 3188-3198	7

788	Hydrogen trapping in alloys studied by thermal desorption spectrometry. 2018 , 747, 511-522		27
787	Further study of the hydrogen embrittlement of martensitic advanced high-strength steel in simulated auto service conditions. 2018 , 135, 120-135		30
786	A cohesive element with degradation controlled shape of the traction separation curve for simulating stress corrosion and irradiation cracking. 2018 , 193, 172-196		7
785	Thermal Desorption Analysis of Hydrogen in Non-hydrogen-Charged Rolling Contact Fatigue-Tested 100Cr6 Steel. 2018 , 66, 4		21
784	Simulation of the impact of internal pressure on the integrity of a hydrogen-charged Type-316L stainless steel during slow strain rate tensile test. 2018 , 43, 8558-8568		10
783	Probing the Effect of Hydrogen on Elastic Properties and Plastic Deformation in Nickel Using Nanoindentation and Ultrasonic Methods. 2018 , 70, 1068-1073		8
782	Local strains in 1.4301 austenitic stainless steel with internal hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 725, 447-455	5-3	7
781	Techniques for investigation of hydrogen embrittlement of advanced high strength steels. 2018 , 36, 413-434		13
780	Numerical simulation of the transient hydrogen trapping process using an analytical approximation of the McNabb and Foster equation. 2018 , 43, 9083-9093		22
779	Nanoindentation study of corrosion-induced grain boundary degradation in a pipeline steel. 2018 , 88, 88-92		15
778	Flow stress model for hydrogen degraded Inconel 718. 2018 , 119, 56-64		3
777	Influence of pre-strain on the gaseous hydrogen embrittlement resistance of a high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 718, 43-47	5-3	25
776	Effects of alloying elements on vacancies and vacancy-hydrogen clusters at coherent twin boundaries in nickel alloys. 2018 , 148, 9-17		23
775	Effect of hydrogen on the collective behavior of dislocations in the case of nanoindentation. 2018 , 148, 18-27		16
774	Influence of hydrogen on the elastic properties of nickel single crystal: A numerical and experimental investigation. 2018 , 148, 280-288		28
773	Effect of Microstructure and Alloy Chemistry on Hydrogen Embrittlement of Precipitation-Hardened Ni-Based Alloys. 2018 , 49, 1167-1181		19
772	A study on the susceptibility of high strength tempered martensite steels to hydrogen embrittlement (HE) based on incremental step load (ISL) testing methodology. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 716, 189-207	5-3	13
771	Review of hydrogen-assisted cracking models for application to service lifetime prediction and challenges in the oil and gas industry. 2018 , 36, 323-347		17

770	Dislocation-Based Finite Element Modelling of Hydrogen Embrittlement in Steel Alloys. 2018 , 213-223	
769	Understanding and mitigating hydrogen embrittlement of steels: a review of experimental, modelling and design progress from atomistic to continuum. 2018 , 53, 6251-6290	138
768	High resolution NanoSIMS imaging of deuterium distributions in 316 stainless steel specimens after fatigue testing in high pressure deuterium environment. 2018 , 2,	8
767	A weakly coupled implementation of hydrogen embrittlement in FE analysis. 2018 , 141, 17-25	12
766	Effects of titanium content on hydrogen embrittlement susceptibility of hot-stamped boron steels. 2018 , 735, 2067-2080	53
765	The detrimental effect of hydrogen at dislocations on the hydrogen embrittlement susceptibility of Fe-C-X alloys: An experimental proof of the HELP mechanism. 2018 , 43, 3050-3061	88
764	Quantifying the effect of hydrogen on dislocation dynamics: A three-dimensional discrete dislocation dynamics framework. 2018 , 112, 491-507	39
763	Hydrogen-assisted failure in a bimodal twinning-induced plasticity steel: Delamination events and damage evolution. 2018 , 43, 2492-2502	13
762	Environmentally assisted fracture behavior of Fe-based amorphous coatings in chloride-containing solutions. 2018 , 738, 37-48	11
761	Method of Evaluating Hydrogen Embrittlement Susceptibility of Tempered Martensitic Steel Showing Intergranular Fracture. 2018 , 49, 490-497	13
760	A mechanistic study of SCC in Alloy 600 through high-resolution characterization. 2018 , 132, 244-259	42
759	Hydrogen-enhanced-plasticity mediated decohesion for hydrogen-induced intergranular and quasi-cleavage fracture of lath martensitic steels. 2018 , 112, 403-430	138
758	Role of hydrogen on the incipient crack tip deformation behavior in α -Fe: An atomistic perspective. 2018 , 123, 014304	12
757	Hydrogen-microvoid interactions at continuum scale. 2018 , 43, 10104-10128	13
756	Service life of corrosion pitted pipes subject to fatigue loading and hydrogen embrittlement. 2018 , 43, 8440-8450	11
755	Diffusion of hydrogen into and through β -iron by density functional theory. 2018 , 672-673, 56-61	6
754	Fracture mechanics I An interpretive technical history. 2018 , 91, 46-86	5
753	Dynamic deformation of hydrogen charged austenitic-ferritic steels: Hydrogen trapping mechanisms, and simulations. 2018 , 731, 1238-1246	9

752	In situ micromechanical testing in environmental scanning electron microscope: A new insight into hydrogen-assisted cracking. 2018 , 144, 257-268	28
751	Formation of iron hydride in Fe under dislocation strain field and its effect on dislocation interaction. 2018 , 141, 254-259	5
750	Effects of hydrogen on thermal creep behaviour of Zircaloy fuel cladding. 2018 , 498, 20-32	12
749	Hydrogen embrittlement revealed via novel in situ fracture experiments using notched micro-cantilever specimens. 2018 , 142, 236-247	55
748	Silicon activation volumes for fracture as affected by hydrogen. 2018 , 144, 56-59	3
747	The Influence of Hydrogen on the Low Cycle Fatigue Behavior of Medium Strength 3.5NiCrMoV Steel Studied Using Notched Specimens. 2018 , 20, 1700680	4
746	Corrosion fatigue and microstructural characterisation of Type 316 austenitic stainless steels tested in PWR primary water. 2018 , 131, 57-70	21
745	Hydrogen embrittlement in compositionally complex FeNiCoCrMn FCC solid solution alloy. 2018 , 22, 1-7	58
744	Estimation of crack initiation stress and local fracture toughness of Ni-alloys 945X (UNS N09946) and 718 (UNS N07718) under hydrogen environment via fracture surface topography analysis. 2018 , 191, 324-343	26
743	Improving hydrogen embrittlement resistance of Hadfield steel by thermo-mechanical flash-treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 712, 133-139	5-3 13
742	Hydrogen-modified dislocation structures in a cyclically deformed ferritic-pearlitic low carbon steel. 2018 , 144, 164-176	32
741	Hydrogen-assisted fatigue crack propagation in a pure BCC iron. Part I: Intergranular crack propagation at relatively low stress intensities. 2018 , 165, 03011	5
740	Evolution Behavior of Hydrogen-Induced Nano Voids in AlZnMgCu Aluminum Alloys under Loading. 2018 , 59, 1532-1535	5
739	Multiscale Mechanism of Fatigue Fracture of Ti6Al4V Titanium Alloy within the Mesomechanical Space-Time-Energy Approach. 2018 , 21, 452-463	5
738	A multi-physics approach to investigate the influence of hydrogen on short fatigue crack propagation. 2018 , 18, e201800191	
737	Temperature Dependence of Fatigue Crack Growth in Low-Alloy Steel Under Gaseous Hydrogen. 2018 ,	
736	Modeling of hydrogen effects on short crack propagation in a metastable austenitic stainless steel (X2CrNi19-11). 2018 , 165, 22005	
735	Recent Studies of Hydrogen Embrittlement in Structural Materials. 2018 , 13, 2233-2238	7

734	Assessment of the contribution of internal pressure to the structural damage in a hydrogen-charged Type 316L austenitic stainless steel during slow strain rate tensile test. 2018 , 13, 1615-1619 ⁰		
733	Averaged equations for bi-continuum material in the long-wavelength approximation. 2018 ,		1
732	Atomistic Simulations of Hydrogen Effects on Lattice Defects in Alpha Iron. 2018 , 1-18		1
731	Tensile mechanical properties and fracture behaviors of nickel-based superalloy 718 in the presence of hydrogen. 2018 , 43, 20118-20132		20
730	Fatigue limit of carbon and Cr Mo steels as a small fatigue crack threshold in high-pressure hydrogen gas. 2018 , 43, 20133-20142		21
729	Biaxial creep performance of CWSR Zircaloy-4 cladding at emulated off-normal conditions of interim dry storage facility. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 736, 400-403	5-3	1
728	Investigation of mechanical properties of stress-relieved and electron-irradiated tungsten after hydrogen charging. 2018 , 17, 29-33		2
727	The Role of Hydrogen on the Local Fracture Toughness Properties of 7XXX Aluminum Alloys. 2018 , 49, 5368-5381		5
726	Synthesis of Ti-Nb alloys from elemental powders by high-energy ball milling and their hydrogenation features. 2018 , 43, 18382-18391		7
725	Hydrogen-assisted fatigue crack growth in ferritic steels – fractographic study. 2018 , 165, 03004		2
724	Influence of gaseous hydrogen on plastic strain in vicinity of fatigue crack tip in Armco pure iron. 2018 , 165, 03006		6
723	Solute hydrogen effects on plastic deformation mechanisms of Fe with twist grain boundary. 2018 , 43, 10481-10495		11
722	Hydrogen Permeation and Hydrogen-Induced Cracking. 2018 , 133-162		15
721	Effect of amorphization-mediated plasticity on the hydrogen-void interaction in ideal lattices under hydrostatic tension. 2018 , 123, 245101		2
720	Atomistic simulation study of the hydrogen diffusion in nickel. 2018 , 152, 374-380		11
719	Interpretation of hydrogen-assisted fatigue crack propagation in BCC iron based on dislocation structure evolution around the crack wake. 2018 , 156, 245-253		57
718	Effect of Hydrogen Charging on Mechanical Twinning, Strain Hardening, and Fracture of 111 and 144 Hadfield Steel Single Crystals. 2018 , 21, 263-273		3
717	Magnetocrystalline effects on the subsurface hydrogen diffusion in Fe(0 0 1). 2018 , 153, 57-63		3

716	Failure investigation of hydrogen induced cracking of stabilator skin in jet aircraft. 2018 , 92, 182-194		4
715	Response relationship between loading condition and corrosion fatigue behavior of nickel-aluminum bronze alloy and its crack tip damage mechanism. 2018 , 144, 356-367		12
714	On the interaction of solute atoms with circular inhomogeneity and edge dislocation. 2018 , 111, 266-287		12
713	HELP versus HEDE in progressively cold-drawn pearlitic steels: Between Donatello and Michelangelo. 2018 , 94, 157-164		8
712	Modelling of thermal stresses in bearing steel structure generated by electrical current impulses. 2018 , 355, 012017		2
711	Hydrogen embrittlement susceptibility of a Ni-16Mo-7Cr base superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 733, 291-298	5.3	2
710	A rationale for modeling hydrogen effects on plastic deformation across scales in FCC metals. 2018 , 111, 72-84		26
709	Hydrogen related degradation in pipeline steel: A review. 2018 , 43, 14584-14617		96
708	Experimental Investigation of the Effect of Hydrogen on Fracture Toughness of 2.25Cr-1Mo-0.25V Steel and Welds after Annealing. 2018 , 11,		14
707	Effect of Cementite on the Hydrogen Diffusion/Trap Characteristics of 2.25Cr-1Mo-0.25V Steel with and without Annealing. 2018 , 11,		8
706	Investigation of the Influence of Pre-Charged Hydrogen on Fracture Toughness of As-Received 2.25Cr1Mo0.25V Steel and Weld. 2018 , 11,		6
705	Numerical Simulation of Tensile Behavior of Corroded Aluminum Alloy 2024 T3 Considering the Hydrogen Embrittlement. 2018 , 8, 56		4
704	Multiscale Modelling of Hydrogen Transport and Segregation in Polycrystalline Steels. 2018 , 8, 430		13
703	The role of intergranular fracture on hydrogen-assisted fatigue crack propagation in pure iron at a low stress intensity range. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 733, 316-328	5.3	36
702	Understanding the Interaction between a Steel Microstructure and Hydrogen. 2018 , 11,		16
701	Specimen thickness effect on the property of hydrogen embrittlement in single edge notch tension testing of high strength pipeline steel. 2018 , 43, 15575-15585		16
700	Elucidating the contribution of mobile hydrogen-deformation interactions to hydrogen-induced intergranular cracking in polycrystalline nickel. 2018 , 158, 180-192		59
699	Performance of nitrogen ion-implanted supermartensitic stainless steel in chlorine- and hydrogen-rich environments. 2018 , 351, 29-41		10

698	Hydrogen embrittlement of the equi-molar FeNiCoCr alloy. 2018 , 157, 218-227		35
697	Influence of Stress Re-distribution on Hydrogen-induced Fatigue Crack Propagation. 2018 , 104, 46-53		
696	Hydrogen stress cracking and crack initiation in precipitation hardened Ni-alloys. 2018 , 89, 74-87		7
695	Influence of vanadium on the hydrogen embrittlement of aluminized ultra-high strength press hardening steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 735, 448-455	5-3	27
694	Influence of hydrogen on strain localization and fracture behavior in AlZnMgCu aluminum alloys. 2018 , 159, 332-343		27
693	Numerical analysis of hydrogen transport into a steel after shot peening. 2018 , 11, 5-16		11
692	Beating hydrogen with its own weapon: Nano-twin gradients enhance embrittlement resistance of a high-entropy alloy. 2018 , 21, 1003-1009		70
691	Hydrogen behavior in high strength steels during various stress applications corresponding to different hydrogen embrittlement testing methods. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 735, 61-72	5-3	12
690	Peculiar temperature dependence of hydrogen-enhanced fatigue crack growth of low-carbon steel in gaseous hydrogen. 2018 , 154, 101-105		14
689	Fatigue behaviour of AA6061-T6 alloys in the corrosive environment. 2018 , 165, 03015		0
688	In situ Transmission Electron Microscopy Investigation of Dislocation Interactions. 2018 , 1-37		0
687	The influence of hydrogen on deformation under the elastic stress in mooring chain steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 730, 295-302	5-3	3
686	In Situ Observation of Hydrogen-Induced Cracking Propagation Behavior. 2018 , 74, 1054-1062		3
685	Hydrogen-Assisted Crack Growth in the Heat-Affected Zone of X80 Steels during in Situ Hydrogen Charging. 2019 , 12,		4
684	Modeling of Hydrogen Effects on the Thermomechanical Behavior of NiTi-Based Shape Memory Alloys. 2019 , 5, 206-217		0
683	Assessment of hydrogen embrittlement via image-based techniques in AlZnMgCu aluminum alloys. 2019 , 176, 96-108		30
682	The role of atomistic simulations in probing hydrogen effects on plasticity and embrittlement in metals. 2019 , 216, 106502		29
681	A fully coupled implementation of hydrogen embrittlement in FE analysis. 2019 , 135, 102673		8

680	Advanced modeling and numerical simulations for the thermo-chemico-mechanical behaviour of materials with damage and hydrogen, based on the thermodynamics of irreversible processes. 2019 , 164, 79-97			7
679	Hydrogen informed Gurson model for hydrogen embrittlement simulation. 2019 , 217, 106542			10
678	Effect of microstructure and temperature on the stress corrosion cracking of two microalloyed pipeline steels in H ₂ S environment for gas transport. 2019 , 105, 1055-1068			19
677	Unification of hydrogen-enhanced damage understanding through strain-life experiments for modeling. 2019 , 216, 106504-106504			3
676	The synergistic action and interplay of hydrogen embrittlement mechanisms in steels and iron: Localized plasticity and decohesion. 2019 , 216, 106528			143
675	The effect of age-hardening mechanism on hydrogen embrittlement in high-nitrogen steels. 2019 , 44, 20529-20544			7
674	Effect of Hydrogen on the Substructure of Lenticular Martensite in Fe-31Ni Alloy. 2019 , 50, 4027-4036			4
673	Ductility and fatigue properties of low nickel content type 316L austenitic stainless steel after gaseous thermal pre-charging with hydrogen. 2019 , 44, 28031-28043			12
672	Comparative study of hydrogen-induced intergranular fracture behavior in Ni and CuNi alloy at ambient and cryogenic temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 766, 138349	5.3		13
671	Visualization of trapped hydrogen along grain boundaries and its quantitative contribution to hydrogen-induced intergranular fracture in pure nickel. 2019 , 8, 100478			7
670	Understanding the effect of niobium on hydrogen-induced blistering in pipeline steel: A combined experimental and theoretical study. 2019 , 159, 108142			15
669	Mechanical and microstructural analysis on hydrogen-related fracture in a martensitic steel. 2019 , 44, 29034-29046			16
668	Phenomenon of skin effect in metals due to hydrogen absorption. 2019 , 31, 1961-1975			18
667	The effect of hydrostatic stress on the hydrogen induced mechanical degradation of dual phase steel: A combined experimental and numerical approach. 2019 , 221, 106704			11
666	Effect of pre-strain on hydrogen embrittlement of metastable austenitic stainless steel under different hydrogen conditions. 2019 , 44, 26036-26048			18
665	Control of hydrogen-induced failure in metastable austenite by grain size refinement. 2019 , 8, 100514			8
664	Numerical study of hydrogen influence on void growth at low triaxialities considering transient effects. 2019 , 164, 105176			6
663	Diffusion and trapping of hydrogen due to elastic interaction with ϵ -Ni ₃ Ti precipitates in Custom 465 stainless steel. 2019 , 44, 31610-31620			6

662	Impacts of Hydrogen Embrittlement on Oil and Gas Wells: Theories behind Premature Failures. 2019,			1
661	The Effects of Electrochemical Hydrogen Charging on Room-Temperature Tensile Properties of T92/TP316H Dissimilar Weldments in Quenched-and-Tempered and Thermally-Aged Conditions. 2019, 9, 864			3
660	Hydrogen Embrittlement of Austenitic Stainless Steels with Ultrafine-Grained Structures of Different Morphologies. 2019, 22, 313-326			15
659	Ni-Based Alloys for Reactor Internals and Steam Generator Applications. 2019, 349-409			4
658	The effect of isothermal heat treatment on hydrogen environment-assisted cracking susceptibility in Monel K-500. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 764, 138249	5-3		10
657	Effect of electrochemical charging on the hydrogen embrittlement susceptibility of alloy 718. 2019, 179, 36-48			23
656	Modelling of Fatigue Crack Initiation in Hydrogen Charged Polycrystalline Nickel. 2019, 14, 668-675			4
655	Tensile and fracture behaviors of austenitic high-manganese steels subject to different hydrogen embrittlement test methods. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 766, 138367	5-3		3
654	Multiscale analysis of hydrogen-induced softening in f.c.c. nickel single crystals oriented for multiple-slips: elastic screening effect. 2019, 9, 13042			4
653	Hydrogen Desorption Spectra from Excess Vacancy-Type Defects Enhanced by Hydrogen in Tempered Martensitic Steel Showing Quasi-cleavage Fracture. 2019, 50, 5091-5102			19
652	Role of surface oxide layers in the hydrogen embrittlement of austenitic stainless steels: A TOF-SIMS study. 2019, 180, 329-340			3
651	Observation of internal oxidation in a 20% cold-worked Fe-17Cr-12Ni stainless steel through high-resolution characterization. 2019, 173, 144-148			10
650	In situ high energy X-ray diffraction measurement of strain and dislocation density ahead of crack tips grown in hydrogen. 2019, 180, 272-286			22
649	Effect of grain size on hydrogen embrittlement in stable austenitic high-Mn TWIP and high-N stainless steels. 2019, 44, 25076-25090			10
648	An insight into PWR primary water SCC mechanisms by comparing surface and crack oxidation. 2019, 148, 213-227			21
647	Strain-rate sensitivity of hydrogen-assisted damage evolution and failure in dual-phase steel: From vacancy to micrometer-scale void growth. 2019, 216, 106513			4
646	Graphene coating on nickel as effective barriers against hydrogen embrittlement. 2019, 374, 610-616			7
645	Hydrogen embrittlement. 2019, 567-607			0

644	Hydrogen transport by dislocation movement in austenitic steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 761, 138059	5-3	12
643	Hydrogen partitioning behavior and related hydrogen embrittlement in Al-Zn-Mg alloys. 2019 , 216, 106503		14
642	Hydrogen-induced cracking of an aluminum single crystal: An atomistic simulation. 2019 , 169, 109084		4
641	Simulation of the effect of internal pressure on the integrity of hydrogen pre-charged BCC and FCC steels in SSRT test conditions. 2019 , 216, 106505		3
640	Anisotropy of cold-worked Type-304 austenitic stainless steel: Focus on the hydrogen diffusivity. 2019 , 44, 20516-20528		4
639	Control of Heterogeneous Microstructure for Improving Delayed Fracture Resistance of Ultrahigh Strength Hot Stamping Steel Sheets. 2019 , 105, 173-181		2
638	Is Hydrogen Diffusion along Grain Boundaries Fast or Slow? Atomistic Origin and Mechanistic Modeling. 2019 , 122, 215501		16
637	Interaction between hydrogen and cyclic stress and its role in fatigue damage mechanism. 2019 , 157, 146-156		15
636	Effects of H segregation on shear-coupled motion of <110> grain boundaries in Fe. 2019 , 44, 18616-18627		6
635	Hydrogen effects on mechanical property and microstructure of a Zr-based metallic glass composite. 2019 , 520, 119464		3
634	In Situ Transmission Electron Microscopy Investigation of Dislocation Interactions. 2019 , 131-166		0
633	New techniques for imaging and identifying defects in electron microscopy. 2019 , 44, 450-458		6
632	Discussion of some recent literature on hydrogen-embrittlement mechanisms: addressing common misunderstandings. 2019 , 37, 377-395		25
631	Assessment of the impact of hydrogen on the stress developed ahead of a fatigue crack. 2019 , 174, 181-188		16
630	Dependence of strain rate on hydrogen-induced hardening of austenitic stainless steel investigated by nanoindentation. 2019 , 44, 14055-14063		1
629	Electrochemical Investigation and Identification of Titanium Hydrides Formed in Mixed Chloride Sulfuric Acid Solution. 2019 , 166, C3096-C3105		5
628	Hydrogen Embrittlement and Improved Resistance of Al Addition in Twinning-Induced Plasticity Steel: First-Principles Study. 2019 , 12,		1
627	Hydrogen embrittlement in metallic nanowires. 2019 , 10, 2004		22

626	Hydrogen desorption behavior in Al ₁₈ Zn ₁ Mg alloy. 2019 , 69, 186-193	1
625	Influence of hydrogen environment on dislocation nucleation and fracture response of <1 1 0> grain boundaries in nickel. 2019 , 165, 40-50	12
624	A nanotwinned austenite stainless steel with high hydrogen embrittlement resistance. 2019 , 788, 1066-1075	18
623	First-principles study of hydrogen diffusion and self-clustering below tungsten surfaces. 2019 , 125, 165105	9
622	Hydrogen isotope effect on the embrittlement and fatigue crack growth of steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 753, 331-340	5-3 4
621	An Approach to Modeling Structural Materials with Low Hydrogen Concentration. 2019 , 63-87	6
620	Characterization of the crack initiation and propagation in Alloy 600 with a cold-worked surface. 2019 , 152, 82-92	19
619	Stress Corrosion Crack Propagation. 2019 , 313-338	
618	Hydrogen and Crystal Defects Interactions: Effects on Plasticity and Fracture. 2019 , 199-222	6
617	An investigation of the effect of hydrogen on ductile fracture using a unit cell model. 2019 , 44, 8627-8640	4
616	Corrosion fatigue behavior and crack-tip characteristic of 316LN stainless steel in high-temperature pressurized water. 2019 , 518, 21-29	11
615	Hydrogen-enhanced fatigue crack growth in a single-edge notched tensile specimen under in-situ hydrogen charging inside an environmental scanning electron microscope. 2019 , 170, 87-99	32
614	Inhibitory effect of oxygen on hydrogen-induced fracture of A333 pipe steel. 2019 , 42, 1387-1401	10
613	The coarsening behavior of η -Ni ₃ (Ti, Al) phase in a precipitation strengthened Fe-based alloy. 2019 , 151, 390-395	4
612	The effects of replacing Ni with Mn on hydrogen embrittlement in Cr-Ni-Mn-N austenitic steels. 2019 , 152, 93-100	5
611	The influence of hydrogen on Lomer junctions. 2019 , 166, 173-177	5
610	Incorporating hydrogen in mesoscale models. 2019 , 163, 282-289	5
609	Techno-economic Feasibility of Modified Pulse Arc Deposition on Thick Section of Quenched and Tempered Steel. 2019 , 269, 01012	1

608	First-principles study of diffusion and interactions of hydrogen with silicon, phosphorus, and sulfur impurities in nickel. 2019 , 125, 125104	1
607	Hydrogen-enhanced fatigue crack growth behaviors in a ferritic Fe-3wt%Si steel studied by fractography and dislocation structure analysis. 2019 , 44, 5030-5042	9
606	Effect of CrxCyNiCr coating on the hydrogen embrittlement of 17-4 PH stainless steel using the smooth bar tensile test. 2019 , 54, 7356-7368	3
605	Shielding or anti-shielding effects of solute hydrogen near a finite length crack: A new possible mechanism of hydrogen embrittlement. 2019 , 132, 109-120	7
604	Response of Hydrogen Desorption and Hydrogen Embrittlement to Precipitation of Nanometer-Sized Copper in Tempered Martensitic Low-Carbon Steel. 2019 , 71, 1349-1356	7
603	Quantification of Temperature Dependence of Hydrogen Embrittlement in Pipeline Steel. 2019 , 12,	6
602	Nonlinear waves of the internal medium due to dynamic loading of bi-continuum. 2019 ,	1
601	Effects of Drawn Strain and Aging Temperature on Critical Diffusible Hydrogen Content and Absorbed Hydrogen Content in Pearlitic Steel Wires. 2019 , 105, 655-663	5
600	. 2019 ,	1
599	Calculating the activation energies of nickel, manufactured using 3D printing technology, with multichannel hydrogen diffusion model. 2019 , 121, 04017	1
598	Hydrogen Embrittlement Susceptibility Evaluation of Tempered Martensitic Steels Showing Different Fracture Surface Morphologies. 2019 , 59, 1705-1714	8
597	Development of high-strength and high-toughness aluminum alloy. 2019 , 69, 9-14	3
596	Pronounced transition of crack initiation and propagation modes in the hydrogen-related failure of a Ni-based superalloy 718 under internal and external hydrogen conditions. 2019 , 161, 108186	24
595	Effect of hydrogen-induced surface steps on the nanomechanical behavior of a CoCrFeMnNi high-entropy alloy revealed by in-situ electrochemical nanoindentation. 2019 , 114, 106605	16
594	Scale Transition in Finite Element Simulations of HydrogenElasticity Interactions. 2019 , 87-129	
593	Tensile and fatigue properties of 17-4PH martensitic stainless steels in presence of hydrogen. 2019 , 19, 249-258	0
592	Improved hydrogen embrittlement resistance after quenchingEtempering treatment for a Cr-Mo-V high strength steel. 2019 , 44, 29017-29026	20
591	Influence of Stress Re-distribution on Hydrogen-induced Fatigue Crack Propagation. 2019 , 59, 1683-1690	0

590	Investigation of the Hydrogen Embrittlement Susceptibility of AA5083-H111 and AA6082-T6 Dissimilar Friction Stir Welds. 2019 , 28, 7687-7701	
589	Hydrogen Embrittlement Induced by Hydrogen Charging during Deformation of Ultra-high Strength Steel Sheet Consisting of Ferrite and Nanometer-sized Precipitates. 2019 , 59, 2327-2333	7
588	Baking Effect on Desorption of Diffusible Hydrogen and Hydrogen Embrittlement on Hot-Stamped Boron Martensitic Steel. 2019 , 9, 636	3
587	Hydrogen embrittlement controlled by reaction of dislocation with grain boundary in alpha-iron. 2019 , 112, 206-219	47
586	Discrete dislocation plasticity HELPs understand hydrogen effects in bcc materials. 2019 , 123, 41-60	39
585	Quantifying Void Formation and Changes to Microstructure During Hydrogen Charging: A Precursor to Embrittlement and Blistering. 2019 , 50, 1460-1467	2
584	Enumeration of the hydrogen-enhanced localized plasticity mechanism for hydrogen embrittlement in structural materials. 2019 , 165, 734-750	146
583	Effect of hydrogen on nanomechanical properties in Fe-22Mn-0.6C TWIP steel revealed by in-situ electrochemical nanoindentation. 2019 , 166, 618-629	38
582	The Influence of Microstructural Variations on Hydrogen Absorbance and Tensile Properties at Elevated Hydrogen Levels for TRIP-Aided Bainitic Ferrite Steels. 2019 , 75, 888-897	4
581	Effect of hydrogen and strain rate on nanoindentation creep of austenitic stainless steel. 2019 , 44, 1253-1262	13
580	Nonlinear dynamics of hydrogen concentration in high-strength and high-entropy alloys. 2019 , 31, 1785-1794	4
579	Mechanistic understanding of the temperature dependence of crack growth rate in alloy 600 and 316 stainless steel through high-resolution characterization. 2019 , 165, 73-86	20
578	Lowering Strain Rate Simultaneously Enhances Carbon- and Hydrogen-Induced Mechanical Degradation in an Fe-33Mn-1.1C Steel. 2019 , 50, 1137-1141	11
577	Investigation of mechanical behavior of dissimilar material FSBR joints exposed to a marine environment. 2019 , 37, 376-385	10
576	Influence of raceway surface finish on white etching crack generation in WEC critical oil under rolling-sliding conditions. 2019 , 422-423, 81-93	8
575	Effects of temperature on corrosion fatigue behavior of 316LN stainless steel in high-temperature pressurized water. 2019 , 146, 80-89	19
574	Hydrogen-induced ductility loss of precipitation-strengthened Fe-Ni-Cr-based superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 739, 335-342	5:3 17
573	Hydrogen-affected fatigue crack propagation at various loading frequencies and gaseous hydrogen pressures in commercially pure iron. 2019 , 121, 197-207	18

572	Atomistic simulations of hydrogen effects on tensile deformation behaviour of [0 0 1] twist grain boundaries in nickel. 2019 , 159, 12-23		6
571	Micromechanical modelling of coupled crystal plasticity and hydrogen diffusion. 2019 , 99, 92-115		8
570	Effects of hydrogen and stress on the electrochemical and passivation behaviour of 304 stainless steel in simulated PEMFC environment. 2019 , 293, 60-77		33
569	The effect of hydrogen charging on the evolution of lattice defects and phase composition during tension in 316L stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 739, 31-36	5-3	1
568	A phase-field regularized cohesive zone model for hydrogen assisted cracking. 2020 , 358, 112614		40
567	Hydrogen induced fast-fracture. 2020 , 134, 103740		17
566	On a correlation between the hydrogen effects on atomic interactions and mobility of grain boundaries in the alpha-iron. Stage I. A change in the electron structure of the alpha-iron due to hydrogen. 2020 , 258, 126801		6
565	Dual role of nanosized NbC precipitates in hydrogen embrittlement susceptibility of lath martensitic steel. 2020 , 164, 108345		31
564	Effects of Prior Austenite Grain Size on Hydrogen Delayed Fracture of Hot-Stamped Boron Martensitic Steel. 2020 , 51, 237-251		4
563	On the suitability of slow strain rate tensile testing for assessing hydrogen embrittlement susceptibility. 2020 , 163, 108291		38
562	Hydrogen distribution in metallic polycrystals with deformation. 2020 , 135, 103776		7
561	Orientation Dependence on Plastic Flow Behavior of Hydrogen-Precharged Micropillars of High-Mn Steel. 2020 , 26, 1741-1748		11
560	Evaluation of material susceptibility to hydrogen embrittlement (HE): An approach based on experimental and finite element (FE) analyses. 2020 , 224, 106714		6
559	The influence of hydrogen on cyclic plasticity of oriented nickel single crystal. Part I: Dislocation organisations and internal stresses. 2020 , 126, 102611		6
558	Effect of post-processing annealing treatments on microstructure development and hydrogen embrittlement in API 5L X70 pipeline steel. 2020 , 161, 110124		7
557	Effect of grain boundary on the crack-tip plasticity under hydrogen environment: An atomistic study. 2020 , 127, 015101		1
556	Effect of dislocation cell walls on hydrogen adsorption, hydrogen trapping and hydrogen embrittlement resistance. 2020 , 166, 108428		26
555	The key role played by dislocation core radius and energy in hydrogen interaction with dislocations. 2020 , 185, 518-527		9

554	The role of plasticity and hydrogen flux in the fracture of a tempered martensitic steel: A new design of mechanical test until fracture to separate the influence of mobile from deeply trapped hydrogen. 2020 , 186, 133-148	13
553	A primary study of the effect of hydrostatic pressure on stress corrosion cracking of Ti-6Al-4V alloy in 3.5% NaCl solution. 2020 , 165, 108402	20
552	Dependence of hydrogen embrittlement mechanisms on microstructure-driven hydrogen distribution in medium Mn steels. 2020 , 183, 313-328	42
551	Role of Cavity Formation on Long-Term Stress Corrosion Cracking Initiation: A Review. 2020 , 76, 142-175	6
550	The effect of hydrogen concentration on the fracture surface of medium Mn steels. 2020 , 108, 104263	5
549	Effect of strain rate on environmental hydrogen embrittlement susceptibility of a severely cold-rolled AlCu alloy. 2020 , 172, 109057	19
548	Effects of hydrogen on the mechanical response of X80 pipeline steel subject to high strain rate tensile tests. 2020 , 43, 684-697	5
547	Hydrogen embrittlement of low carbon structural steel at macro-, micro- and nano-levels. 2020 , 45, 2145-2156	52
546	Effect of low partial hydrogen in a mixture with methane on the mechanical properties of X70 pipeline steel. 2020 , 45, 2368-2381	20
545	Density functional theory calculations of iron - vanadium carbide interfaces and the effect of hydrogen. 2020 , 45, 2382-2389	11
544	Influence of hydrogen embrittlement on impact property and microstructural characteristics in aluminum alloy weld. 2020 , 172, 109073	5
543	A decohesion pathway for hydrogen embrittlement in nickel: Mechanism and quantitative prediction. 2020 , 185, 98-109	24
542	Unravelling the effect of hydrogen on microstructure evolution under low-cycle fatigue in a high-manganese austenitic TWIP steel. 2020 , 126, 102625	7
541	Hydrogen clustering in bcc metals: Atomic origin and strong stress anisotropy. 2020 , 201, 23-35	4
540	Diffusible hydrogen behavior and delayed fracture of cold rolled martensitic steel in consideration of automotive manufacturing process and vehicle service environment. 2020 , 9, 13483-13501	9
539	First principles study of the effect of hydrogen in austenitic stainless steels and high entropy alloys. 2020 , 200, 932-942	10
538	On the fatigue crack growth behavior of Ti ₁₀ V ₂ Fe ₃ Al in gaseous hydrogen. 2020 , 45, 27929-27940	0
537	Hydrogen-assisted cracking in 2205 duplex stainless steel: Initiation, propagation and interaction with deformation-induced martensite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 797, 140079	5-3 10

536	A detailed investigation of the effect of hydrogen on the mechanical response and microstructure of Al 7075 alloy under medium strain rate impact loading. 2020 , 45, 25509-25522			7
535	Hydrogen, as an alloying element, enables a greater strength-ductility balance in an Fe-Cr-Ni-based, stable austenitic stainless steel. 2020 , 199, 181-192			12
534	Hydrogen embrittlement in ferritic steels. 2020 , 7,			15
533	Modelling the combined effects of hydrogen traps and surface films on hydrogen permeation in ferritic steels. 2020 , 67, 240-247			
532	Advanced Problems in Mechanics. 2020 ,			
531	Effect of internal hydrogen on the tensile properties of different CrMo(V) steel grades: Influence of vanadium addition on hydrogen trapping and diffusion. 2020 , 45, 22054-22079			7
530	On the hydrogen embrittlement behavior of nickel-based alloys: Alloys 718 and 725. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 792, 139785	5-3		16
529	A novel 13Cr austenitic stainless steel with excellent mechanical properties and high hydrogen embrittlement resistance via heterostructure and TRIP effects. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 793, 139835	5-3		3
528	The influence of hydrogen on plasticity in pure iron-theory and experiment. 2020 , 10, 10209			3
527	Atomistic investigation of hydrogen induced decohesion of Ni grain boundaries. 2020 , 150, 103586			5
526	Applications of phase field fracture in modelling hydrogen assisted failures. 2020 , 110, 102837			20
525	Low-cycle fatigue behaviors of 316LN austenitic stainless steel in borated and lithiated high temperature water with different levels of dissolved oxygen. 2020 , 176, 109048			1
524	Crystal plasticity based study to understand the interaction of hydrogen, defects and loading in austenitic stainless-steel single crystals. 2020 , 45, 32632-32647			1
523	Hydrogen diffusion in γ -Fe ₂ O ₃ : Implication for an effective hydrogen diffusion barrier. 2020 , 45, 32648-32653			1
522	Sensitivity to hydrogen embrittlement of AISI 4140 steel: A numerical study on fracture toughness. 2020 , 110, 102810			3
521	Hydrogen-enhanced intergranular failure of sulfur-doped nickel grain boundary: In situ electrochemical micro-cantilever bending vs. DFT. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 794, 139967	5-3		12
520	Effect of Tempering Temperature after Thermo-Mechanical Control Process on Microstructure Characteristics and Hydrogen-Induced Ductility Loss in High-Vanadium X80 Pipeline Steel. 2020 , 13,			4
519	Alloy Optimization for Reducing Delayed Fracture Sensitivity of 2000 MPa Press Hardening Steel. 2020 , 10, 853			10

518	Extraordinary Response of H-Charged and H-Free Coherent Grain Boundaries in Nickel to Multiaxial Loading. 2020 , 10, 590	4
517	A first-principles study on the hydrogen trap characteristics of coherent nano-precipitates in α -Fe. 2020 , 45, 27941-27949	10
516	Coating density as the key factor behind hydrogen embrittlement of cadmium-plated 4340 steel. 2020 , 50, 1045-1058	3
515	Fracture strain model for hydrogen embrittlement based on hydrogen enhanced localized plasticity mechanism. 2020 , 45, 25541-25554	11
514	Coupled Diffusion-Mechanical Model of NiTi Alloys Accounting for Hydrogen Diffusion and Ageing. 2020 , 12, 2050039	2
513	Hydrogen environment assisted cracking in X70 welding heat-affected zone under a high-pressure hydrogen gas. 2020 , 109, 102746	1
512	Hydrogen embrittlement behavior of 13Cr-5Ni-2Mo supermartensitic stainless steel. 2020 , 176, 109046	9
511	Stress diffusion interactions in an elastoplastic medium in the presence of geometric discontinuity. 2020 , 1-17	
510	Harmless Preexisting Crack in Structures Made of Hydrogen-Embrittlement Sensitive Materials under Monotonic Tension. 2020 , 774, 012098	
509	Current Challenges and Opportunities in Microstructure-Related Properties of Advanced High-Strength Steels. 2020 , 51, 5517-5586	42
508	The Role of Microstructure in Hydrogen-Induced Fatigue Failure of 304 Austenitic Stainless Steel. 2020 , 51, 5704-5714	2
507	Micromechanical modeling of fatigue crack initiation in hydrogen atmosphere. 2020 , 149, 103557	6
506	Addressing H-Material Interaction in Fast Diffusion Materials-A Feasibility Study on a Complex Phase Steel. 2020 , 13,	5
505	Molecular Dynamics Studies of Hydrogen Effect on Intergranular Fracture in α -Iron. 2020 , 13,	3
504	Impact of precipitates on the hydrogen embrittlement behavior of a V-alloyed medium-manganese austenitic stainless steel. 2020 , 9, 13524-13538	16
503	Fracture toughness of a 9% Ni steel pipe girth welded with Ni-based superalloy 625 filler metal operating in a sour environment. 2020 , 9, 6305-6321	8
502	Evaluation of the active mechanism for acidic SCC induced mechanical degradation: A methodological approach. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 790, 139645	5.3 2
501	Correlative NanoSIMS and electron microscopy methods for understanding deuterium distributions after fatigue testing of 304/304L stainless steel in deuterated water. 2020 , 45, 20042-20052	2

500	Dislocation-density based crystal plasticity model with hydrogen-enhanced localized plasticity in polycrystalline face-centered cubic metals. 2020 , 148, 103472	7
499	Hydrogen embrittlement of an automotive 1700 MPa martensitic advanced high-strength steel. 2020 , 171, 108726	20
498	Hydrogen embrittlement of the coarse grain heat affected zone of a quenched and tempered 42CrMo4 steel. 2020 , 45, 16890-16908	8
497	Nonlinear modeling of dynamics of hydrogen concentration in alloys. 2020 , 90, 105402	3
496	A mechanism behind hydrogen-assisted fatigue crack growth in ferrite-pearlite steel focusing on its behavior in gaseous environment at elevated temperature. 2020 , 168, 108558	10
495	Distinguishing geometric and metallurgic hydrogen-embrittlement susceptibilities in pre-cracked structures made of interstitial-free steel under monotonic tension. 2020 , 108, 102574	1
494	Hydrogen-assisted fatigue crack-propagation in a Ni-based superalloy 718, revealed via crack-path crystallography and deformation microstructures. 2020 , 174, 108814	11
493	Effects of hydrogen content that alters damage evolution mechanisms in SUH 660 precipitation-strengthened Fe-Cr-Ni steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 791, 139750	5-3 2
492	Three mechanisms of hydrogen-induced dislocation pinning in tungsten. 2020 , 60, 086015	5
491	Effects of 100 ppb dissolved oxygen on low-cycle fatigue behaviors of 316LN austenitic stainless steel in borated and lithiated high temperature water and mechanism behind these effects. 2020 , 168, 108567	3
490	Phase field modeling of hydrogen embrittlement. 2020 , 45, 20053-20068	7
489	Origin of micrometer-scale dislocation motion during hydrogen desorption. 2020 , 6, eaaz1187	12
488	A strong and ductile medium-entropy alloy resists hydrogen embrittlement and corrosion. 2020 , 11, 3081	46
487	Behavior of hydrogen at Fe/W interface: a first-principle calculation study. 2020 , 57, 1223-1230	0
486	Characteristic Dependency of Hydrogen-Affected Fatigue Crack Growth and Crack Tip Plasticity on Low Loading Frequency in Iron. 2020 , 51, 4313-4326	2
485	Defect tolerance and hydrogen susceptibility of the fatigue limit of an additively manufactured Ni-based superalloy 718. 2020 , 139, 105740	14
484	Fatigue Crack Growth of Electron Beam Melted Ti-6Al-4V in High-Pressure Hydrogen. 2020 , 13,	9
483	Modelling Hydrogen Induced Stress Corrosion Cracking in Austenitic Stainless Steel. 2020 , 36, 213-222	6

482	Effect of Prestrain on Hydrogen-Induced Delayed Cracking for Medium Mn Steels. 2020 , 29, 1929-1938		1
481	A Modified Electrochemical Nanoindentation Setup for Probing Hydrogen-Material Interaction Demonstrated on a Nickel-Based Alloy. 2020 , 72, 2020-2029		4
480	Multiscale Assessment of Deformation Induced by Hydrogen Environment-Assisted Cracking in a Peak-Aged Ni-Cu Superalloy. 2020 , 72, 1993-2002		4
479	Removing hydrogen in solid metal using electric current pulse. 2020 , 845, 156083		4
478	The combined and interactive effects of orientation, strain amplitude, cycle number, stacking fault energy and hydrogen doping on microstructure evolution of polycrystalline high-manganese steels under low-cycle fatigue. 2020 , 134, 102803		2
477	A modelling framework for coupled hydrogen diffusion and mechanical behaviour of engineering components. 2020 , 66, 189-220		10
476	Hydrogen-assisted, intergranular, fatigue crack-growth in ferritic iron: Influences of hydrogen-gas pressure and temperature variation. 2020 , 140, 105806		14
475	Effects of dissolved hydrogen on low-cycle fatigue behaviors and hydrogen uptake of 316LN austenitic stainless steel in simulated pressurized water reactor primary water. 2020 , 134, 105457		5
474	Environment hydrogen embrittlement of pipeline steel X70 under various gas mixture conditions with in situ small punch tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 781, 139114	5-3	20
473	Hydrogen-modified interaction between lattice dislocations and grain boundaries by atomistic modelling. 2020 , 45, 9174-9187		10
472	Hydrogenation-induced lattice expansion and its effects on hydrogen diffusion and damage in TiAl ₃ V. 2020 , 188, 686-696		18
471	Evaluation of hydrogen-induced cracking in high-strength steel welded joints by acoustic emission technique. 2020 , 190, 108573		11
470	Effects of hydrogen influence on strained steel 1020. 2020 , 45, 10199-10208		3
469	Effective hydrogen diffusion coefficient for CoCrFeMnNi high-entropy alloy and microstructural behaviors after hydrogen permeation. 2020 , 45, 10227-10232		13
468	Fundamental criterion K _{trans} for failure analysis of hydrogen-assisted cracks in notched specimens of pure Ni. 2020 , 107, 102556		3
467	Modeling of solute hydrogen effect on various planar fault energies. 2020 , 45, 9162-9173		10
466	The role of ultrasonic nanocrystalline surface modification at elevated temperature on the hydrogen charging behavior of high-Mn steels. 2020 , 9, 100626		2
465	The Character of Hydrogen Embrittlement in Mooring Chain Steel. 2020 , 72, 2003-2010		1

464	The combined effects of hydrogen and aging condition on the deformation and fracture behavior of a precipitation-hardened nickel-base superalloy. 2020 , 186, 616-630		11
463	The influence of hydrogen on cyclic plasticity of oriented nickel single crystal. Part II: Stability of edge dislocation dipoles. 2020 , 129, 102667		2
462	Effect of initial dislocation density on hydrogen accumulation behavior in martensitic steel. 2020 , 178, 318-323		17
461	Mechanical degradation of Fe-C-X steels by acidic stress-corrosion cracking. 2020 , 167, 108509		3
460	Hydrogen resistance of a 1 GPa strong equiatomic CoCrNi medium entropy alloy. 2020 , 167, 108510		16
459	Hydrogen effects in X30MnCrN16-14 austenitic steel. 2020 , 51, 531-538		
458	An SEM compatible plasma cell for in situ studies of hydrogen-material interaction. 2020 , 91, 043705		8
457	Stacking Fault Energy Based Alloy Screening for Hydrogen Compatibility. 2020 , 72, 1982-1992		6
456	Study of correlation between the steels susceptibility to hydrogen embrittlement and hydrogen thermal desorption spectroscopy using artificial neural network. 2020 , 32, 14995-15006		1
455	Hydrogen Effects on Material Performance. 2020 , 72, 1979-1981		0
454	Experimental and Numerical Investigation of Hydrogen Embrittlement Effect on Microdamage Evolution of Advanced High-Strength Dual-Phase Steel. 2020 , 27, 2276		7
453	Investigation of Hydrogen Embrittlement Susceptibility and Fracture Toughness Drop after in situ Hydrogen Cathodic Charging for an X65 Pipeline Steel. 2020 , 11,		5
452	Distinct fatigue limit of a 6XXX series aluminum alloy in relation to crack tip strain-aging. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 785, 139378	5-3	1
451	Subtleties Behind Hydrogen Embrittlement of Cadmium-Plated 4340 Steel Revealed by Thermal Desorption Spectroscopy and Sustained-Load Tests. 2020 , 51, 3054-3065		8
450	Microscopic defects formed during crack incubation, initiation and propagation processes causing hydrogen-related fracture of dual-phase steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 780, 139209	5-3	4
449	Hydrogen-accelerated spontaneous microcracking in high-strength aluminium alloys. 2020 , 10, 1998		11
448	Nonlinear hybrid continuum-discrete dynamic model of influence of hydrogen concentration on strength of materials. 2021 , 33, 933-941		4
447	Effect of hydrogen on deformation behavior of Alloy 725 revealed by in-situ bi-crystalline micropillar compression test. 2021 , 67, 243-253		10

446	Environmental hydrogen embrittlement associated with decohesion and void formation at soluble coarse particles in a cold-rolled AlCu based alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 799, 139850	5-3	14
445	The potential significance of tempering treatment in alleviating the hydrogen embrittlement susceptibility of a hot-rolled and intercritically annealed medium-Mn steel. 2021 , 119, 104969		2
444	On the role of traps in the microstructural control of environmental hydrogen embrittlement of a 7xxx series aluminum alloy. 2021 , 855, 157300		16
443	Comparative study of hydrogen embrittlement resistance between additively and conventionally manufactured 304L austenitic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 803, 140499	5-3	9
442	Effect of hydrogen on the embrittlement susceptibility of Fe ₂ Mn-0.6C TWIP steel revealed by in-situ tensile tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 802, 140638	5-3	12
441	Comparative study of phase-field damage models for hydrogen assisted cracking. 2021 , 111, 102840		8
440	Quantification of the temperature threshold of hydrogen embrittlement in X90 pipeline steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 800, 140118	5-3	8
439	Towards the prediction of hydrogen-induced crack growth in high-strength steels. 2021 , 159, 107245		1
438	The effect of nitrogen alloying on hydrogen-assisted plastic deformation and fracture in FeMnNiCoCr high-entropy alloys. 2021 , 194, 113642		7
437	Damage assessment and mechanical performance of Cr-Mo steel used in hydrogen storage vessels. 2021 , 120, 105031		5
436	Straining-temperature dependence of vacancy behavior in hydrogen-charged austenitic stainless steel 316L. 2021 , 46, 6960-6969		5
435	Local hydrogen accumulation after cold forming and heat treatment in punched advanced high strength steel sheets. 2021 , 856, 158226		5
434	A critical perspective on pipeline processing and failure risks in hydrogen service conditions. 2021 , 857, 158240		6
433	Mechanism of hydrogen-induced hardening in pure nickel and in a copper-nickel alloy analyzed by micro Vickers hardness testing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 805, 140580	5-3	2
432	Elucidating the loading rate dependence of hydrogen environment-assisted cracking in a Ni-Cu superalloy. 2021 , 111, 102846		5
431	Revisiting the effects of low-concentration hydrogen in NiTi self-expandable stents. 2021 , 118, 111405		1
430	Hydrogen-induced delayed fracture of a 1180 MPa martensitic advanced high-strength steel under U-bend loading. 2021 , 26, 101887		2
429	Effect of cathodic polarisation on stress corrosion cracking behaviour of a Ni(Fe, Al)-maraging steel in artificial seawater. 2021 , 179, 109176		14

428	A coupled cohesive modeling approach for predicting fractures in low alloy steel under high-pressure hydrogen gas. 2021 , 46, 2702-2715		2
427	Influence of interactions between hydrogen and (101 $\bar{1}2$) twin boundary on hydrogen embrittlement in Fe. 2021 , 26, 101802		2
426	Mechanistic interpretation on acidic stress-corrosion cracking of NiCrMoV steam turbine steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 802, 140433	5-3	2
425	The role of electric current in the formation of white-etching-cracks. 2021 , 101, 59-76		2
424	Hydrogen-Assisted Cracking Behavior of Ni Alloy 718: Microstructure, H Testing Protocol, and Fractography. 2021 , 52, 46-64		
423	The influence of elastic deformations in high-strength structural materials on the hydrogen transport. 2021 , 225, 01010		1
422	Environmentally Assisted Cracking Initiation in High-Temperature Water. 2021 , 11, 199		1
421	Analysis of Sleeper Screw Failures. 2021 , 93-105		
420	Hydrogen Embrittlement Prevention in High Strength Steels by Application of Various Surface Coatings-A Review. 2021 , 673-683		1
419	On the local evaluation of the hydrogen susceptibility of cold-formed and heat treated advanced high strength steel (AHSS) sheets. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 800, 140276	5-3	13
418	Microstructural characterization of failed screws. 2021 , 44, 2425-2430		
417	The Role of Hydrogen on the Behavior of Intergranular Cracks in Bicrystalline Fe Nanowires. 2021 , 11,		0
416	Fracture toughness of coarse-grain heat affected zone of quenched and tempered CrMo steels with internal hydrogen: Fracture micromechanisms. 2021 , 241, 107433		4
415	The Key Role of Dedicated Experimental Methodologies in Revealing the Interaction Between Hydrogen and the Steel Microstructure. 2021 , 59-85		
414	Influence of Linear Elastic Stresses on Hydrogen Diffusion into Metals. 2021 , 143-157		1
413	In situ nanoindentation during electrochemical hydrogen charging: a comparison between front-side and a novel back-side charging approach. 2021 , 56, 8732-8744		1
412	The role of synthetic oils in controlling hydrogen permeation of rolling/sliding contacts.. 2020 , 11, 726-738		4
411	On the hydrogen environment-assisted cracking resistance of a compositionally complex CoNiCrBeMoTi alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 802, 140601	5-3	3

410	Internal and External Hydrogen-related Loss of Ductility in a Ni-based Superalloy 718 and Its Temperature Dependence. 2021 , 107,	1
409	Hydrogen Induced Dislocation Core Reconstruction in Bcc Metals.	
408	Interrogating the Effects of Hydrogen on the Behavior of Planar Deformation Bands in Austenitic Stainless Steel. 2021 , 52, 1516-1525	3
407	Unraveling the effect of dislocations and deformation-induced boundaries on environmental hydrogen embrittlement behavior of a cold-rolled AlZnMgCu alloy. 2021 , 46, 8285-8299	12
406	Effect of solution treatment temperature on grain boundary composition and environmental hydrogen embrittlement of an AlZnMgCu alloy. 2021 , 184, 109937	13
405	Hydrogen diffusivity in different microstructural components in martensite matrix with retained austenite. 2021 , 46, 8269-8284	2
404	An experimental-numerical screening method for assessing environmentally assisted degradation in high strength steels. 2021 , 245, 107572	1
403	Hydrogen uptake and its influence in selective laser melted austenitic stainless steel: A nanoindentation study. 2021 , 194, 113718	7
402	Dark etching regions under rolling contact fatigue: a review. 2021 , 37, 347-376	3
401	The Potential of the Internal Friction Technique to Evaluate the Role of Vacancies and Dislocations in the Hydrogen Embrittlement of Steels. 2021 , 92, 2100037	0
400	Change in the Positron Annihilation Lifetime of Vacancy Clusters Containing Hydrogen Atoms in Electron-Irradiated F82H. 1024, 71-78	
399	Relationship between hydrogen concentration and mechanical properties of 5Ni-16Cr-Mo steel. 2021 , 28, 699-711	
398	Carbon effect on hydrogen diffusivity and embrittlement in austenitic stainless steels. 2021 , 180, 109226	8
397	Hydrogen segregation near a crack tip in nickel. 2021 , 194, 113697	6
396	High cycle fatigue behaviors of API X65 pipeline steel welded joints in air and H ₂ S solution environment. 2021 , 46, 10423-10437	4
395	Review of Positron Lifetime Studies of Lattice Defects Formed during Tensile Deformation in a Hydrogen Environment. 2021 , 61, 1056-1063	2
394	Hydrogen assisted crack initiation in metals under monotonic loading: A new experimental approach. 2021 , 112, 102917	0
393	Stress corrosion cracking and fracture behaviors of gaseous-hydrogenated Titanium alloy Ti-6321 during slow strain rate tests. 2021 , 8, 046531	0

392	Current Challenges and Opportunities Toward Understanding Hydrogen Embrittlement Mechanisms in Advanced High-Strength Steels: A Review. 2021 , 34, 741-754		7
391	Dual-phase cohesive zone modelling and experimental validation for hydrogen-assisted cracking of 2205 duplex stainless steel. 2021 , 190, 104296		1
390	Effect of hydrogen charging time on hydrogen blister and hydrogen-induced cracking of pure iron. 2021 , 181, 109200		7
389	Quantities and distribution of strain-induced vacancies and dislocations enhanced by hydrogen in iron. 2021 , 208, 116663		5
388	Influence of hydrogen on softened heat-affected zones during in-situ slow strain rate testing in advanced high-strength steel welds. 2021 , 181, 109229		6
387	Characterising hydrogen induced cracking of alloy 625+ using correlative SEM - EDX and NanoSIMS. 2021 , 181, 109228		5
386	Dependence of blistering and deuterium retention on damage depth in damaged tungsten exposed to deuterium plasma. 2021 , 61, 056003		0
385	Hydrogen Distribution Permeated through a Duplex Stainless Steel Detected by Hydrogen Microprint Technique. 2021 , 61, 1272-1277		1
384	Hydrogen trapping in additive manufactured Ti ₆ Al ₄ V alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 811, 141050	5:3	4
383	Influence of non-homogeneous microstructure on hydrogen diffusion and trapping simulations near a crack tip in a welded joint. 2021 , 112, 102879		2
382	Effect of in-situ nanoparticles on the mechanical properties and hydrogen embrittlement of high-strength steel. 2021 , 28, 644-656		4
381	Effects of solid solution and grain-boundary segregation of Mo on hydrogen embrittlement in 32MnB5 hot-stamping steels. 2021 , 207, 116661		9
380	Controlling factors and mechanisms of fatigue crack growth influenced by high pressure of gaseous hydrogen in a commercially pure iron. 2021 , 112, 102885		3
379	Study of Diffusible Behavior of Hydrogen in First Generation Advanced High Strength Steels. 2021 , 11, 782		0
378	Hydrogen effect on the mechanical behaviour and microstructural features of a Fe-Mn-C twinning induced plasticity steel. 2021 , 28, 835-846		3
377	Damage micromechanisms of stress corrosion cracking in Al-Mg alloy with high magnesium content. 2021 , 184, 109343		7
376	Modeling Dislocation-Mediated Hydrogen Transport and Trapping in Face-Centered Cubic Metals. 2022 , 144,		0
375	Influence of hydrogen-enhanced plasticity and decohesion mechanisms of hydrogen embrittlement on the fracture resistance of steel. 2021 , 123, 105312		22

374	Hydrogen fracture maps for sheared-edge-controlled hydrogen-delayed fracture of 1180 MPa advanced high-strength steels. 2021 , 184, 109360		4
373	Evaluating the Hydrogen Embrittlement Susceptibility of Aged 2205 Duplex Stainless Steel Containing Brittle Sigma Phase. 2021 , 92, 2000693		
372	Phase-Field Modeling of Hydrogen Diffusion and Trapping in Steels. 2021 , 34, 1421-1426		0
371	Hydrogen enhanced cracking via dynamic formation of grain boundary inside aluminium crystal. 2021 , 183, 109307		5
370	Effects of local stress, strain, and hydrogen content on hydrogen-related fracture behavior in low-carbon martensitic steel. 2021 , 210, 116828		10
369	Unraveling the formation mechanism of hydrogenated vacancy at δ Ni/ δ Ni3Al phase interface and its roles in interfacial stability and strength. 2021 , 194, 110449		3
368	Effect of vanadium and rare earth microalloying on the hydrogen embrittlement susceptibility of a Fe-18Mn-0.6C TWIP steel studied using the linearly increasing stress test. 2021 , 185, 109440		7
367	Hydrogen Stress Cracking Behaviour in Dissimilar Welded Joints of Duplex Stainless Steel and Carbon Steel. 2021 , 11, 1039		2
366	Effect of Solution Aggressiveness on the Crack Growth Resistance and Cracking Mechanism of AA2024-T3. 2021 , 77, 1029-1040		
365	Improvement of hydrogen embrittlement resistance by intense pulsed ion beams for a martensitic steel. 2021 , 46, 21239-21248		0
364	Impact of hydrogen and crosshead displacement rate on the martensitic transformations and mechanical properties of 304L stainless steel. 2021 , 113, 102952		1
363	Mitigation of hydrogen embrittlement in alloy custom age 625 PLUS via grain boundary engineering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 818, 141377	5-3	2
362	Effect of hydrogen on the ideal shear strength in metals and its implications on plasticity: A first-principles study. 2021 , 46, 25726-25737		0
361	Hydrogen Atom and Molecule Adsorptions on FeCrAl (100) Surface: A First-Principle Study. 2021 , 9,		
360	Effect of C/N Interaction on Hydrogen Embrittlement of 15Cr-5Mn-Ni-Based Austenitic Stainless Steels. 2021 , 52, 4161-4169		0
359	Upsizing high-strength fail-safe steel through warm tempforming. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 819, 141514	5-3	3
358	Crystal Plasticity Modeling of Hydrogen and Hydrogen-Related Defects in Initial Yield and Plastic Flow of Single-Crystal Stainless Steel 316L. 2021 , 52, 3961-3977		1
357	Chemical heterogeneity enhances hydrogen resistance in high-strength steels. 2021 , 20, 1629-1634		14

356	Effects of hydrogen on the deformation mechanism of face-centred cubic Fe single crystal with nanovoid: A molecular dynamics simulation. 2021 , 870, 159330		2
355	AgCl-induced hot salt stress corrosion cracking in a titanium alloy. 2021 , 187, 109497		4
354	Influence of internal hydrogen content on the evolved microstructure beneath fatigue striations in 316L austenitic stainless steel. 2021 , 213, 116957		1
353	Effect of Hydrogen on Dislocation Nucleation and Motion: Nanoindentation Experiment and Discrete Dislocation Dynamics Simulation. 1		0
352	Hydrogen-induced fast fracture in notched 1500 and 1700 MPa class automotive martensitic advanced high-strength steel. 2021 , 188, 109550		3
351	Interpretation of complex, tensile-fracture phenomena in precipitation-hardened, martensitic stainless steels, 17-4PH, in presence of hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 823, 141717	5.3	1
350	Experimental investigation on the performance of AISI 440C martensitic stainless steel against the formation of white etching areas under sliding dynamic loading. 1-11		
349	Effect of hetero- and homo-nanostructure on the hydrogen embrittlement resistance in heavily deformed 316LN austenitic stainless steel. 2021 , 6, 682-688		
348	Strain rate sensitivity of hydrogen-assisted martensitic transformation and associated hydrogen embrittlement in high-Mn steel. 2021 , 46, 27221-27233		4
347	Hierarchical Characteristics of Hydrogen-Assisted Crack Growth and Microstructural Strain Evolution in Tempered Martensitic Steels: Case of Quasi-cleavage Fracture. 2021 , 52, 4703-4713		3
346	Numerical simulation of the transient hydrogen trapping process using an analytical approximation of the McNabb and Foster equation. Part 2: Domain of validity. 2021 , 46, 30173-30189		1
345	Effect of specific microstructures on hydrogen embrittlement susceptibility of a modified AISI 4130 steel. 2021 ,		3
344	Low-cycle fatigue behaviors of 316L austenitic stainless steels with different surface finishing in simulated pressurized water reactor primary water and an oxygenated, borated, lithiated high temperature water. 2021 , 190, 109709		1
343	Hydrogen embrittlement and hydrogen diffusion behavior in interstitial nitrogen-alloyed austenitic steel. 2021 , 46, 32710-32722		3
342	Evaluation of hydrogen effect on the fatigue crack growth behavior of medium-Mn steels via in-situ hydrogen plasma charging in an environmental scanning electron microscope. 2021 , 85, 30-43		6
341	Hydrogen embrittlement fracture mechanism of 430 ferritic stainless steel: The significant role of carbides and dislocations. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 142043	5.3	1
340	Effect of fatigue damage on the hydrogen embrittlement sensitivity of X80 steel welded joints. 2021 , 46, 38535-38535		1
339	Comparative study on the stress corrosion cracking of a new Ni-advanced high strength steel prepared by TMCP, direct quenching, and quenching & tempering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 825, 141854	5.3	2

338	Corrosion fatigue crack growth behavior of 316LN stainless steel in high-temperature pressurized water. 2021 , 53, 2977-2981		
337	Promotion Effect of Hydrogen on Grain Refinement in Pure Fe by High-Pressure Torsion-Straining. 2021 , 52, 4749		
336	The role of hydrogen in the edge dislocation mobility and grain boundary-dislocation interaction in Fe. 2021 , 46, 32695-32709		3
335	Influence of hydrogen on the stress-relaxation properties of 17-4PH martensitic stainless steel manufactured by laser powder bed fusion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 142125	5-3	0
334	Numerical simulation of hydrogen distribution around a crack tip in a high-Mn steel. 2021 , 28, 102647		
333	Archwires. 2023 , 175-201		
332	Hydrogen diffusivity and solubility in stressed fcc crystals. 2021 , 879, 160425		0
331	Hydrogen embrittlement resistance of TWIP (twinning-induced plasticity) steel in high pressure hydrogen environment. 2021 , 151, 106362		2
330	Interaction between hydrogen and solute atoms in bcc iron. 2021 , 198, 110652		1
329	Phase-field modeling of mechanochemical-coupled stress-corrosion cracking. 2021 , 395, 139196		2
328	Mitigation of hydrogen embrittlement in ultra-high strength lath martensitic steel via Ta microalloying. 2021 , 210, 110090		3
327	Hydrogen-induced transgranular to intergranular fracture transition in bi-crystalline nickel. 2021 , 204, 114122		5
326	Hydrogen embrittlement of additively manufactured austenitic stainless steel 316L. 2021 , 192, 109790		3
325	Study on hydrogen embrittlement and dynamic strain ageing on low-alloy reactor pressure vessel steels. 2021 , 556, 153161		0
324	The effect of hydrogen on the impact-abrasion wear behavior in nanostructured bainitic steels. 2021 , 486-487, 204115		
323	Effect of test velocity on the tensile strength of high strength steels using the small punch test in a hydrogen environment. 2021 , 194, 104552		0
322	Engineering Challenges Associated With Hydrogen Embrittlement in Steels. 2022 , 235-249		
321	Hot Stamping Steel. 2022 , 26-36		0

320	Hydrogen-assisted failure in Inconel 718 fabricated by laser powder bed fusion: The role of solidification substructure in the embrittlement. 2022 , 207, 114308		2
319	Roles of Hydrogen and Plastic Strain Distribution on Delayed Crack Growth in Single-crystalline FeSi alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 803, 140703	5.3	0
318	Modeling of Hydrogen Diffusion in Slow Strain Rate (SSR) Testing of Notched Samples. 2021 , 87-111		1
317	Role of Vanadium Carbide in Hydrogen Embrittlement of Press-Hardened Steels: Strategy From 1500 to 2000MPa. 2021 , 7,		4
316	Energetics of hydrogen adsorption and diffusion for the main surface planes and all magnetic structures of Iron using density functional theory.. 2021 , 11, 28892-28897		
315	Stress Corrosion Cracking of Alloy 600 in PWR Primary Water: Influence of Chromium, Hydrogen and Oxygen Diffusion. 1477-1488		2
314	In Monocrystalline and Polycrystalline Alloy 600. 27-39		3
313	The effect of hydrogen on fatigue properties of metals used for fuel cell system. 2006 , 167-195		1
312	In Situ Measurements of Hydrogen Diffusion in Duplex Stainless Steels by Neutron Radiography. 2014 , 155-163		1
311	Stress Corrosion Cracking of Alloy 600 in PWR Primary Water : Influence of Chromium, Hydrogen and oxygen Diffusion. 2011 , 1477-1490		4
310	Deformation Behaviors. 2016 , 79-101		1
309	Hydrogen effects on the saturation stress and the ability to fracture of nickel single crystals fatigued under cathodic charging. 1998 , 387-392		3
308	A study on the surface and crack tip oxidation of alloy 600 through high-resolution characterization. 2020 , 169, 108616		3
307	Failure analysis of structural steel subjected to long term exposure of hydrogen. 2020 , 114, 104606		10
306	Simulating hydrogen in fcc materials with discrete dislocation plasticity. 2020 , 45, 14565-14577		3
305	Corrosion fatigue crack growth behavior of 316NG heat affected zone in simulated pressurized water reactor environment. 2020 , 537, 152259		2
304	Towards the prediction of intergranular fatigue crack initiation in metals due to hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 787, 139488	5.3	3
303	CORROSION FATIGUE FRACTURE BEHAVIOUR OF A SiC WHISKERALUMINIUM MATRIX COMPOSITE UNDER COMBINED TENSIONCORSION LOADING. 1998 , 21, 1435-1446		6

302	Blister-dominated retention mechanism in tungsten exposed to high-fluence deuterium plasma. 2020 , 60, 126034	4
301	Hydrogen embrittlement I. Analysis of hydrogen-enhanced localized plasticity: Effect of hydrogen on the velocity of screw dislocations in Fe. 2017 , 1,	19
300	Influence of hydrogen core force shielding on dislocation junctions in iron. 2020 , 4,	3
299	Hydrogen/Plasticity Interactions at an Axial Crack in Pipeline Steel. 2008 , 5, 101531	1
298	The Role of Hydrogen on Rolling Contact Fatigue Response of Rolling Element Bearings. 2010 , 7, 102543	34
297	Microstructurally Mediated Changes in Fracture Characteristics for Electrochemically Hydrogenated 4340 Steel. 2015 , 4, 20140026	1
296	Modeling the Effect of Hydrogen on Ductile Fracture. 2018 , 7, 20170073	3
295	Comparison of the Microstructural Changes and X-ray Diffraction Peak Width Decrease during Rolling Contact Fatigue in Martensitic Microstructures. 2012 , 303-328	6
294	Effect of Hydrogen on the Localization of Plastic Deformation under Tensile of Low-Carbon Steel. 2016 , 36, 229-245	1
293	Grain-Boundary Diffusion of Hydrogen Atoms in the α -Iron. 2016 , 36, 1399-1410	4
292	Carbon, Nitrogen and Hydrogen in Iron-Based Solid Solutions: Similarities and Differences in their Effect on Structure and Properties. 2016 , 38, 67-98	4
291	Mechanism of Embrittlement of Metals by Surface-Active Elements. 2018 , 40, 201-218	2
290	Dynamic behavior of hydrogen desorption from pure iron and inconel 625 during elastic and plastic deformations. 2010 , 15, 267-274	4
289	Numerical Analysis of Influence of Hydrogen Charging Method on Thermal Desorption Spectra for Pre-strained High-Strength Steel. 2014 , 54, 153-159	16
288	Modeling of Hydrogen Thermal Desorption Profile of Pure Iron and Eutectoid Steel. 2008 , 94, 522-531	5
287	Suppression Mechanism of Strain-age Hardening in Carbon Steel Associated with Hydrogen Uptake. 2015 , 101, 546-551	1
286	The Influences of Hydrogen on Microscopic Plastic Deformation Behavior of SUS304 and SUS316L Stainless Steels. 2008 , 57, 255-261	17
285	Critical Assessment of the Effect of Atmospheric Corrosion Induced Hydrogen on Mechanical Properties of Advanced High Strength Steel. 2021 , 11, 44	3

284	Hydrogen Embrittlement Behavior of High Mn TRIP/TWIP Steels. 2008 , 18, 394-399	22
283	Coupled Analysis of Hydrogen Transport Within ABAQUS. 2009 , 33, 600-606	7
282	Cathodic hydrogen charging of Inconel 718. 2016 , 3, 1350-1364	6
281	Hydrogen Brittleness of Austenitic Steels. 638-642, 104-109	5
280	Evaluation of delayed fracture property and fractography of notched specimens for high tensile strength steel. 2021 , 87, 21-00242-21-00242	1
279	Mesoscale Model for Predicting Hydrogen Damage in Face Centred Cubic Crystals. 2021 , 24, 588-597	
278	Effect of Hydrogen on Thermal Creep Behaviour of Zr _{0.5} Nb Pressure Tube. 1	
277	The effect of the Ni/Cu ratio on H-induced ductility loss and its mechanism in CuNi binary alloy system. 2021 ,	
276	Hydrogen Transport and Interaction with Material Deformation: Implications for Fracture. 2001 , 864-874	
275	Influence of charged hydrogen on tensile behavior of a pressure vessel steel at relatively high temperatures. 2003 , 94, 1017-1020	
274	Effects of Hydrogen on Mechanical Behavior of Steels. 2004 , 90, 766-775	10
273	Assessment of Effective Factor of Hydrogen Diffusion Equation Using FE Analysis. 2010 , 34, 709-715	
272	The High Cycle Fatigue and Final Fracture Behavior of Alloy Steel 4140 used in Hydrogen Pressure Vessels: Influence of Copper Plating. 121-145	
271	Korrosion und Korrosionsschutz. 2011 , E94-E111	
270	Korrosion und Korrosionsschutz. 2012 , E94-E111	
269	Comparison of the Microstructural Changes and X-ray Diffraction Peak Width Decrease during Rolling Contact Fatigue in Martensitic Microstructures. 2012 , 1-26	1
268	Energy Dispersive Synchrotron Diffraction for In-Situ Analyses of Hydrogen Behavior in Steels. 2013 , 3481-3488	
267	Korrosion und Korrosionsschutz. 2014 , 306-323	

- 266 Digital Image Correlation Measurement of Localized Deformation in Carbon Steel in the Presence of Hydrogen. **2014**, 54, 2411-2415 1
- 265 Effect of Hydrogen on the Tensile Properties of Metals. **2016**, 403-410
- 264 Strength Design Method of Components used in High-pressure Hydrogen gas in Consideration of Safety and Economy. **2016**, 85, 332-336 1
- 263 Future Perspectives. **2016**, 453-457
- 262 Hydrogen Safety Fundamentals. **2016**, 359-384
- 261 Hydrogen-Induced Effects in Annealed and Prestrained 316L-Type Stainless Steel Studied by Mechanical Spectroscopy. **2016**, 36, 841-856
- 260 Relationship between hydrogen embrittlement and second-phase particles in a 7075 aluminum alloy. **2017**, 67, 67-71 1
- 259 Metallurgy of Hot Stamping Technology for Press Engineers. **2017**, 58, 1021-1026 1
- 258 Hydrogen Embrittlement of Metallic Materials and Recent Subjects. **2017**, 56, 230-233 1
- 257 DISLOCATION INDUCED MECHANISMS OF HYDROGEN EMBRITTLEMENT OF METALS AND ALLOYES. **2017**, 21, 32-47 4
- 256 On the Nature of Similarity in Embrittlement of Metals by Hydrogen and Surfactants. **2017**, 1, 1
- 255 Hydrogen Embrittlement Caused by Work Hardening and Stress Concentration on Mild Steel/Aluminum Clinched Joint. **2018**, 67, 170-176 0
- 254 The Influence of Hydrogen on Fatigue Fracture in Mooring Chain Steel. **2019**, 415-426
- 253 Effects of source of hydrogen entry on hydrogen embrittlement sensitivity of AlZnMg base alloys with high amount of zinc. **2018**, 68, 603-609 0
- 252 Hydrogen embrittlement of an AlZnMgCu series alloy with high Zn-content in humid air. **2018**, 68, 615-620 2
- 251 Effect of hydrogen and strain rate on mechanical properties of AlZnMg base alloys with high amount of zinc in micro-indentation. **2018**, 68, 610-614
- 250 Influence of Physical-Metallurgical Factors on Resistance of API Carbon Steels to Sulphide Stress Cracking. **2018**, 20, 41-46 1
- 249 Atomistic Simulations of Hydrogen Effects on Lattice Defects in Alpha Iron. **2019**, 283-300 2

- 248 Development of Ultra-High Strength Steel Sheet and Evaluation Method for Hydrogen Embrittlement Behavior. **2019**, 88, 41-44
- 247 Hydrogen Embrittlement Susceptibility Evaluation of Tempered Martensitic Steels Showing Different Fracture Surface Morphologies. **2019**, 105, 112-121 4
- 246 Fatigue Crack Growth Behavior of a Mn-Ni-Cr Steel in 3.5 % NaCl Medium and Its Modeling. **2019**, 323-344
- 245 Mechanical Spectroscopy Studies of Hydrogen Mobility in Titanium Doped Iron Alloy. **2019**, 41, 1291-1301
- 244 Open questions. **2020**, 221-248
- 243 The force on a defect. **2020**, 163-178
- 242 Dislocations. **2020**, 105-140
- 241 Stress. **2020**, 9-28
- 240 Cracks. **2020**, 179-220
- 239 Strain. **2020**, 1-8
- 238 Hooke's law and elastic constants. **2020**, 29-54
- 237 Point defects. **2020**, 93-104
- 236 Lubricant-Induced White Etching Cracks: Mechanism and Effects of Surface Finishing. **2020**, 131-146 2
- 235 Analysis of Hydrogen Content in Pure Palladium via Neutron Radiography and Tomography. **2020**, 84, 270-275
- 234 An Fe-Ni-Cr interatomic potential and predictions of hydrogen-affected stacking fault energies in austenitic stainless steels. **2021**, 47, 651-651 3
- 233 An In-Situ Electrochemical Nanoindentation (ECNI) Study on the Effect of Hydrogen on the Mechanical Properties of 316L Austenitic Stainless Steel. **2021**, 14, 0
- 232 Calculation of the Activation Energies of Hydrogen in Titanium Manufactured with 3D Printing Technology by Means of a Multichannel Diffusion Model. **2020**, 256-263
- 231 Enhancing the hydrogen embrittlement resistance of 304 steel by grain boundary engineering. **2020**, 111, 995-1001 2

230	Effect of Strain Rate on Hydrogen Embrittlement Susceptibility of Tempered Martensitic Steel and the Rate-Determining Process. 2021 , 107, 986-995		
229	Interrelationship between hydrogen and α -martensite of SUS 304 austenitic stainless steel revealed by tensile tests. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 831, 142169	5.3	2
228	Influence of hydrogen behaviors on tensile properties of equiatomic FeCrNiMnCo high-entropy alloy. 2022 , 892, 162260		2
227	Model of the Effect of Low Natural Concentrations of Hydrogen on Cylindrical Steel Samples. 2020 , 246-255		
226	Application of Molecular Dynamics Calculations to Elucidation of the Mechanism of Hydrogen-Induced Crack Initiation in Fracture Toughness Tests Using Tempered Martensitic Steels. 2021 , 107, 944-954		
225	Effect of Hydrogen on Creep Properties of SUS304 Austenitic Stainless Steel. 2021 , 77, 256-265		2
224	A study of crack initiation in a low alloy steel. 2022 , 223, 117474		1
223	Hydrogen embrittlement mechanisms in advanced high strength steel. 2022 , 223, 117488		2
222	Hydrogen embrittlement behaviors at different deformation temperatures in as-quenched low-carbon martensitic steel. 2021 , 47, 3131-3131		1
221	Investigation on hydrogen embrittlement susceptibility in martensitic steels with 1000MPa yield strength. 2021 , 15, 6883-6883		3
220	Advanced Trends in Metallurgy and Weldability of High-Strength Cold-Resistant and Cryogenic Steels. 2021 , 11, 1891		0
219	Intergranular SCC mechanism of ultrasonic nanocrystalline surface modified AISI 304 SS in H ₂ SO ₄ solution containing chloride. 2021 , 405, 139622		0
218	Study on the hydrogen-induced delayed fracture behavior of Q-P980 and MS980.		
217	General-purpose neural network interatomic potential for the Iron and hydrogen binary system: Toward atomic-scale understanding of hydrogen embrittlement. 2021 , 5,		0
216	Hydrogen embrittlement of additively manufactured AlCoCrFeNi _{2.1} eutectic high-entropy alloy. 2021 , 195, 110007		3
215	Effects of Ni Concentration and Aging Heat Treatment on the Hydrogen Embrittlement Behavior of Precipitation-Hardened High-Mn Austenitic Steel. 2021 ,		
214	The influence of H ₂ S on hydrogen absorption and sulfide stress cracking resistance of high strength low alloy carbon steel C110. 2022 , 99, 104418		0
213	Effect of hydrogen on the mechanical properties and fracture modes of annealed 430 ferritic stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 832, 142491	5.3	0

212	Effect of pre-strain on hydrogen embrittlement of high manganese steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 834, 142596	5.3	0
211	Bcc VFe alloys for the hydrogen separation membranes: Hydrogen solubility and global character of alloying effect. 2022 , 644, 120159		1
210	Effect of hydrogen on evolution of deformation microstructure in low-carbon steel with ferrite microstructure. 2022 , 225, 117549		3
209	Understanding hydrogen embrittlement in press-hardened steel by coupling phase field and hydrogen diffusion modeling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 834, 142523	5.3	1
208	Development of a microstructural cohesive zone model for intergranular hydrogen environmentally assisted cracking. 2022 , 260, 108167		0
207	Hydrogen-induced degradation of high-strength steel pipeline welds: A critical review. 2022 , 133, 105985		4
206	Hydrogen behavior during high-temperature plastic deformation in low-alloy steels. 2022 , 302, 117487		0
205	Some Implications of Dislocation Cells and Internal Stresses on the Hydrogen Diffusion and Trapping Processes in Tensile Strengthening (100) Nickel Single Crystal.		
204	Fatigue Behavior of Super Duplex Stainless Steel Exposed in Natural Seawater Under Cathodic Protection. 2022 , 9,		0
203	Reveal Hydrogen Behavior at Grain Boundaries in Fe ₂ Mn _{0.6} C TWIP Steel via In Situ Micropillar Compression Test. 1		0
202	Effect of Hydrogen and Defects on Deformation and Failure of Austenitic Stainless Steel. 2022 , 235-257		
201	Unveiling nonmonotonic chemical trends in the solubility of H in complex Fe-Cr-Mn carbides by means of ab initio based approaches. 2022 , 6,		
200	Achieving a Carbon Neutral Future through Advanced Functional Materials and Technologies. 2022 , 95, 73-103		3
199	Modeling the Hydrogen Redistribution at the Grain Boundary of Misoriented Bicrystals in Austenite Stainless Steel.. 2022 , 15,		1
198	From the perspective of new technology of blending hydrogen into natural gas pipelines transmission: Mechanism, experimental study, and suggestions for further work of hydrogen embrittlement in high-strength pipeline steels. 2022 , 47, 8071-8090		6
197	Hydrogen induced dislocation core reconstruction in bcc tungsten. 2022 , 226, 117622		2
196	Comparative study on the crack growth behaviours of E690 steel and heat-affected zone microstructures under cathodic potential in artificial seawater based on mechano-electrochemical effect at crack tip. 2022 , 198, 110103		0
195	Influence of charged hydrogen on tensile behavior of a pressure vessel steel at relatively high temperatures. 2022 , 94, 1017-1020		

194	Cracking Process in Delayed Fracture of High-Strength Steel after Long Atmospheric Exposure. 2022,	1
193	Effect of Hydrogen on the Mechanical Properties of ASTM A182 F22 and ASTM A36 Steels Welded Joint Using Inconel 625 as Filler and Buttering Metal. 25,	0
192	In-situ 3D observation of hydrogen-assisted particle damage behavior in 7075 Al alloy by synchrotron X-ray tomography. 2022, 227, 117658	1
191	HYDROGEN TRAPPING BY IRRADIATION-INDUCED DEFECTS IN 316L STAINLESS STEEL: A COMBINED EXPERIMENTAL AND MODELLING STUDY. 2022, 562, 153603	0
190	Hydrogen uptake during active CO ₂ -H ₂ S corrosion of carbon steel wires in simulated annulus fluid. 2022, 199, 110172	0
189	Prospects of enhancing the understanding of material-hydrogen interaction by novel in-situ and in-operando methods. 2022,	
188	External corrosion of oil and gas pipelines: A review of failure mechanisms and predictive preventions. 2022, 100, 104467	7
187	Grain boundary segregation in steels: Towards engineering the design of internal interfaces.	1
186	Hydrogen Embrittlement. 2022, 201-274	0
185	Quantum Effects on $\frac{1}{2}[111]$ Edge Dislocation Motion in α -Hydrogen-Charged Fe from Ring-Polymer Molecular Dynamics. 2022, 132-139	
184	The Influence of Phosphorus on the Temper Embrittlement and Hydrogen Embrittlement of Some Dual-Phase Steels.	
183	Hydrogen as Alloying Element. 2022, 275-290	
182	Influence of Thermomechanical Treatment on Delayed Fracture Property of Mo-Bearing Medium-Carbon Steel. 2022, 62, 377-388	
181	Hydrogen adsorption in phase and grain boundaries of pearlitic steels and its effects on tensile strength. 1	
180	Effect of Functional Fillers on Tribological Characteristics of Acrylonitrile Butadiene Rubber after High-Pressure Hydrogen Exposures.. 2022, 14,	0
179	Effect of tempering on carbides and hydrogen embrittlement in E690 high strength marine structural steel. 1	0
178	Factors Distinguishing Hydrogen-Assisted Intergranular and Intergranular-Like Fractures in a Tempered Lath Martensitic Steel. 2022, 53, 1645-1658	1
177	Evaluation and Analytical Method for Hydrogen Embrittlement. 2022, 71, 327-334	

176	Effect of 3.5 wt.% NaCl and cathodic charging on the atomic strain distribution of a plastically deformed AA 7004.		
175	Low-cycle fatigue behaviors of 316L austenitic stainless steel in high temperature water: effects of pre-soaking, dissolved oxygen, and boric acid & lithium hydroxide. 2022 ,		0
174	Comparative study of embrittlement of quenched and tempered steels in hydrogen environments. 2022 ,		0
173	Eliminating reversible hydrogen embrittlement in high-strength martensitic steel by an electric current pulse. 2022 ,		1
172	Effect of tempering temperature and hydrogen on deformation during tensile tests in a V-added high strength low alloy steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 840, 142920	5.3	0
171	Positron Annihilation Lifetime Spectroscopy Investigation of Thermal Aging Effect for the Mechanical Properties of Hydrogen-Absorbed Tantalum. 2022 , 63, 592-599		
170	Dislocation evolution in copper in the absence and presence of hydrogen. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143082	5.3	0
169	Use of existing steel pipeline infrastructure for gaseous hydrogen storage and transport: A review of factors affecting hydrogen induced degradation. 2022 , 101, 104534		2
168	Improved saline corrosion and hydrogen embrittlement resistances of superaustenitic stainless steel by PIII nitriding. 2022 , 18, 1717-1731		1
167	Criteria for hydrogen-assisted crack initiation in Ni-based superalloy 718. 2022 , 229, 117789		2
166	The significant effect of tantalum on the hydrogen-induced cracking of pipeline steel: Morphology, hydrogen permeation, and theoretical studies. 2022 , 200, 110213		0
165	Effect of shearing prestrain on the hydrogen embrittlement of 1180MPa grade martensitic advanced high-strength steel. 2022 , 199, 110170		1
164	Influence of electrochemical hydrogenation parameters on microstructures prone to hydrogen-induced cracking. 2022 , 101, 104533		1
163	Influence of hydrogen vacancy interactions on natural and artificial ageing of an AlMgSi alloy. 2022 , 905, 164251		0
162	Understanding the role of matrix precipitates on the environmentally assisted cracking behavior of AA 7050 alloy. 2022 , 201, 110281		0
161	A predictive model unifying hydrogen enhanced plasticity and decohesion. 2022 , 215, 114707		3
160	Ab initio Simulation of Dissolution Energy and Bond Energy of Hydrogen with 3sp, 3d, and 4d Impurities in bcc Iron. 2021 , 63, 1065-1068		
159	Mesosopic model of hydrogen embrittlement in particle strengthened materials. 2022 , 102, 698-717		

158	Experimental investigation on the hydrogen embrittlement characteristics and mechanism of natural gas-hydrogen transportation pipeline steels. 2022 , 9, 046512		1
157	Micro- and Macroscopic Numerical Analyses on Effect of Repulsive Exclusion Zones on Interstitial Particle Diffusivity in Bcc Lattice Based on Diffusion Path Network Model. 2022 , 62, 766-775		
156	Formation Mechanism and Influence of White Etching Area on Contact Fatigue Spalling of M50 Bearing Steel. 2022 , 106273		1
155	A microstructure informed and mixed-mode cohesive zone approach to simulating hydrogen embrittlement. 2022 ,		1
154	An Overview of the Evolution of Degradation Mechanisms for Leaks in Metal Pipes and Joints and the Effectiveness of LLMs and LDMs.		
153	On the Role of Vacancy-Hydrogen Complexes on Dislocation Nucleation and Propagation in Metals.		
152	Local fracture criterion for quasi-cleavage hydrogen-assisted cracking of tempered martensitic steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143213	5.3	0
151	Electrochemical Evaluation of Stress Corrosion Cracking Susceptibility of Ti-6Al-3Nb-2Zr-1Mo Alloy Welded Joint in Simulated Deep-Sea Environment.. 2022 , 15,		
150	Variables Affecting Unstable Fracture Load of Cracked Pipes Under Hydrogen Environment. 2022 , 108527		
149	Investigation of hydrogen embrittlement properties of Ni-based alloy 718 fabricated via laser powder bed fusion. 2022 ,		0
148	Application of atomic simulation for studying hydrogen embrittlement phenomena and mechanism in iron-based alloys. 2022 ,		1
147	Simulation of ductile-to-brittle transition combining complete Gurson model and CZM with application to hydrogen embrittlement. 2022 , 268, 108511		0
146	Effect of solute atoms (C, Al and Si) on hydrogen embrittlement resistance of high-Mn TWIP steels. 2022 , 110376		0
145	Surface Engineering in Wind Turbine Tribology. 2022 , 128545		0
144	Restoration of ductility in hydrogen embrittled dual-phase (DP 780) steel by the electric pulse treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143256	5.3	0
143	Recent Studies of Hydrogen-related Defects in Iron-based Materials. 2022 , 62, 832-839		0
142	Temperature mitigates the hydrogen embrittlement sensitivity of martensitic steels in slow strain rates. 2022 , 202, 111187		0
141	Effect of Structure and Hydrogen on the Short-Term Creep of Titanium Ti-2.9Al-4.5V-4.8Mo Alloy. 2022 , 15, 3905		0

140	Interstitial hydrogen enhances the mobility of some Grain Boundaries in tungsten.		0
139	Hydrogen trapping and hydrogen embrittlement in 15-5PH stainless steel. 2022 , 110416		1
138	Analysis of Hydrogen-Assisted Brittle Fracture Using Phase-Field Damage Modelling Considering Hydrogen Enhanced Decohesion Mechanism. 2022 , 12, 1032		1
137	Suppressed hydrogen embrittlement of high-strength Al alloys by Mn-rich intermetallic compound particles. 2022 , 118110		1
136	The influence of hydrogen on the low cycle fatigue behavior of strain-hardened 316L stainless steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143477	5:3	0
135	The Mechanism of the High Resistance to Hydrogen-Induced Strength Loss in Ultra-High Strength High-Entropy Alloy. 2022 , 12, 971		
134	Molecular dynamics simulations of the hydrogen embrittlement base case: atomic hydrogen in a defect free single crystal. 1-9		
133	Studying crack propagation along symmetric tilt grain boundary with H segregation in Ni by MD simulation. 2022 , 212, 111569		1
132	Study on the Hydrogen Embrittlement of Nanograined Materials with Different Grain Sizes by Atomistic Simulation. 2022 , 15, 4589		1
131	Research and demonstration on hydrogen compatibility of pipelines: a review of current status and challenges. 2022 ,		1
130	The effect of an Al-induced ferritic microfilm on the hydrogen embrittlement mechanism in martensitic steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143587	5:3	0
129	The influence of phosphorus on the temper embrittlement and hydrogen embrittlement of some dual-phase steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143379	5:3	
128	Influence of hydrogen on the S _N fatigue of DP1180 advanced high-strength steel. 2022 , 205, 110465		0
127	Slip transmission and voiding during slip band Intersections in Fe70Ni10Cr20 stainless steel. 2022 , 220, 114925		0
126	First-principles study of hydrogen-vacancy interactions in CoCrFeMnNi high-entropy alloy. 2022 , 922, 166259		
125	Fatigue crack growth of Z2CND18-12N austenitic stainless steel and its heat affected zone in a dissimilar metal weld joint in 325 ° water.		
124	Hydrogen in pipeline steels: Recent advances in characterization and embrittlement mitigation. 2022 , 104709		2
123	First principles DFT analysis on the diffusion kinetics of hydrogen isotopes through bcc iron (Fe): Role of temperature and surface coverage. 2022 ,		0

- 122 Influence of hydrogen on the damage behavior of IMC particles in Al-Zn-Mg-Cu alloys. **2022**, 72, 411-419 1
- 121 Revisiting stress-corrosion cracking and hydrogen embrittlement in 7xxx-Al alloys at the near-atomic-scale. **2022**, 13, 1
- 120 Evaluation of hydrogen diffusion and trapping in nickel Alloy 625 by thermal desorption spectroscopy. **2022**, 0
- 119 Hydrogen-related Fracture in Martensitic Steels. **2022**, 71, 672-677
- 118 Friedel Oscillations Induce Hydrogen Accumulation near the Σ (111) Twin Boundaries in δ -Fe. 2200324
- 117 Damage associated with interactions between microstructural characteristics and hydrogen/methane gas mixtures of pipeline steels. **2022**, 0
- 116 Hydrogen transport in 17 ϕ PH stainless steel: Influence of the metallurgical state on hydrogen diffusion and trapping. **2022**, 112239
- 115 Hydrogen-associated decohesion and localized plasticity in a high-Mn and high-Al two-phase lightweight steel. **2022**, 118296 1
- 114 Effect of post-processing heat treatment on hydrogen embrittlement susceptibility of API 5L X70 pipeline steel. **2022**, 199, 104762 0
- 113 Hydrogen uptake induced by CO₂ enhances hydrogen embrittlement of iron in hydrogen blended natural gas. **2022**, 207, 110594
- 112 Coupled diffusion-mechanics framework for simulating hydrogen assisted deformation and failure behavior of metals. **2022**, 157, 103392 0
- 111 Adsorption and dissociation of high-pressure hydrogen on Fe (100) and Fe₂O₃ (001) surfaces: Combining DFT calculation and statistical thermodynamics. **2022**, 239, 118267
- 110 Alleviating the strength-ductility trade-off dilemma in high manganese steels after hydrogen charging by adjusting the gradient distribution of twins. **2022**, 207, 110579
- 109 Hydrogen-enhanced grain boundary vacancy stockpiling causes transgranular to intergranular fracture transition. **2022**, 239, 118279 1
- 108 In situ nanomechanical characterization of hydrogen effects on nickel-based alloy 725 under different metallurgical conditions. **2023**, 135, 156-169
- 107 The effect of hydrogen on dislocation motion and cracking in tungsten foil. **2022**, 207, 110547 0
- 106 Strain-induced twins and martensite: Effects on hydrogen embrittlement of selective laser melted (SLM) 316L stainless steel. **2022**, 208, 110669 1
- 105 Hydrogen delaying the formation of Guinier-Preston zones in aluminium alloys. **2022**, 241, 118373 0

104	Hydrogen-induced phase boundary Cr-segregation in high-entropy alloy AlCoCrFeNi _{2.1} . 2022 , 26, 101556	1
103	A combined thermal desorption spectroscopy and internal friction study on the interaction of hydrogen with microstructural defects and the influence of carbon distribution. 2022 , 241, 118374	0
102	Multiscale modeling of hydrogen-affected crack tip damage using a fully coupled chemo-mechanical crystal plasticity framework for austenitic stainless steel. 2022 ,	0
101	Structure and Mobility of H in Fe and Fe-Ni Alloys. 2022 ,	0
100	Environmentally Assisted Fatigue in the Gaseous Atmosphere. 2022 ,	0
99	Microscopic Damage Growth with Hydrogen-induced Longitudinal Cracks in Tensile-shear Test on Mechanical Clinching Joint of Mild Steel Sheet and Aluminum Alloy Sheet. 2022 ,	0
98	Preparation of an overall intergranular fracture surface caused by hydrogen and identification of lattice defects present in the local area just below the surface of tempered martensitic steel. 2023 , 223, 115072	0
97	The d band center as an indicator for the hydrogen solution and diffusion behaviors in transition metals. 2022 ,	0
96	The Effects of NaCl on Hydrogen Permeation and Sulfide Stress Cracking Resistance of C110 High-strength Steel.	0
95	Application of a nano-incremental step loading (N-ISL) in a Ni-base superalloy under a hydrogen charging environment. 2022 , 44,	0
94	Revisiting mechanisms for hydrogen-assisted fracturing of Ni-Fe-Cr alloys. 2022 , 144074	0
93	Defeating hydrogen-induced grain-boundary embrittlement via triggering unusual interfacial segregation in FeCrCoNi-type high-entropy alloys. 2022 , 241, 118410	1
92	Effects of Diffusible Hydrogen on Tensile-shear Fatigue Life of Spot Welds of Advanced High-strength Steel Sheets. 2022 , 108, 846-856	0
91	Hydrogen Embrittlement Mechanism of Ultrafine-grained Iron with Different Grain Sizes. 2022 , 108, 864-876	0
90	Influence of Hydrogen on the Damage Behavior of IMC Particles in Al ₇₅ Mg ₂₅ Alloys. 2022 ,	0
89	Origin of Serrated Markings on the Hydrogen Related Quasi-cleavage Fracture in Low-carbon Steel with Ferrite Microstructure. 2022 , 62, 2081-2088	0
88	Hydrogen Effect on the Evolution of the Structural-Phase State and Superplastic Properties of Ultrafine-Grained Ti-Al-V-Mo Alloy. 2022 , 25, 413-423	0
87	Detection of voids in hydrogen embrittled iron using transmission X-ray microscopy. 2022 ,	0

- 86 Accelerating off-lattice kinetic Monte Carlo simulations to predict hydrogen vacancy-cluster interactions in Fe. **2022**, 118452 ○
- 85 The Effect of Hydrogen on Failure of Complex Phase Steel under Different Multiaxial Stress States. **2022**, 12, 1705 ○
- 84 Hydrogen Stress Cracking Resistance of Seamless Pipes for Hydrogen Storage and Transport Applications. **2022**, ○
- 83 Mesoeffect of the Dual Mechanism of Hydrogen-Induced Cracking. **2022**, 25, 466-478 ○
- 82 Application of Molecular Dynamics Calculations to Elucidation of the Mechanism of Hydrogen-Induced Crack Initiation in Fracture Toughness Tests Using Tempered Martensitic Steels. **2022**, 62, 2107-2117 ○
- 81 Fatigue crack threshold and crack growth behavior of 17 Φ PH steel determined with internal hydrogen. **2022**, 108882 ○
- 80 Effect of Microstructure on Strain Aging and Hydrogen Embrittlement Behavior of Bake Hardening Steels. **2022**, 60, 811-818 ○
- 79 Investigation of hydrogen embrittlement behavior in X65 pipeline steel under different hydrogen charging conditions. **2022**, 144262 1
- 78 Time-dependent crack growth mechanism in Ni-based single crystal superalloys at high-temperature. **2022**, 859, 144179 ○
- 77 The role of cementite on the hydrogen embrittlement mechanism in martensitic medium-carbon steels. **2022**, 859, 144204 ○
- 76 Mechanical load induced hydrogen charging of retained austenite in quenching and partitioning (Q&P) steel. **2022**, ○
- 75 Interaction of dissolved oxygen with the dislocation structure of low-carbon deposited metal. **2022**, 2022, 27-30 ○
- 74 Chapter 4 | Hydrogen Damage. **2022**, 59-71 ○
- 73 Degradation mechanisms associated with metal pipes and the effective impact of LDMs and LLMs in water transport and distribution. 095440622211339 ○
- 72 Influence of Thermal Oxide Layers on the Hydrogen Transport through the Surface of SAE 1010 Steel. **2022**, 169, 111503 ○
- 71 Switching nanoprecipitates to resist hydrogen embrittlement in high-strength aluminum alloys. **2022**, 13, ○
- 70 Role of solute atoms and vacancy in hydrogen embrittlement mechanism of aluminum: A first-principles study. **2022**, ○
- 69 Atomistic insights into stress corrosion cracking of α -Fe in supercritical water: The coupling effect of hydrogen embrittlement and intergranular corrosion. **2023**, 218, 111991 ○

- 68 Electronic property and effective diffusion coefficient calculation model of hydrogen isotopes in multicomponent steel 2.25Cr1Mo from first-principles calculations. **2023**, 574, 154182 ○
- 67 Contributions of polarized dislocation walls, internal stresses and vacancies on hydrogen trapping processes in tensile strengthening (100) nickel single crystal. **2023**, 245, 118622 ○
- 66 Crystal crack dislocation model and micro-crack nucleation criterion in the hydrogen environment. **2023**, 98, 104899 ○
- 65 Comparison of Crack Initiation Sites and Main Factors Causing Hydrogen Embrittlement of Tempered Martensitic Steels with Different Carbide Precipitation States. **2022**, ○
- 64 Modeling of the Influence of Hydrogen on the Deformation of Metals. **2022**, 57, 774-781 ○
- 63 Correlation between grain size variation and hydrogen embrittlement in a cost-effective Fe40Mn40Ni10Cr10 austenitic medium entropy alloy. **2022**, ○
- 62 In situ structural and mechanical analysis of the hydrogen-expanded austenite. **2022**, ○
- 61 A Bibliometric and Visualized Overview of Hydrogen Embrittlement from 1997 to 2022. **2022**, 15, 9218 ○
- 60 Application of DFT Simulation to the Investigation of Hydrogen Embrittlement Mechanism and Design of High Strength Low Alloy Steel. **2023**, 16, 152 ○
- 59 Hydrogen-prompted heterogeneous development of dislocation structure in Ni. **2022**, 118660 ○
- 58 Hydrogen Embrittlement Evaluation and Prediction in Press-Hardened Steels. ○
- 57 Temperature-Dependent Hydrogen Embrittlement of Austenitic Stainless Steel on Phase Transformation. **2023**, 13, 35 ○
- 56 Effect of Microstructure on the Mechanical Response of Hydrogen-Charged Pure Iron. **2022**, 12, 2160 ○
- 55 Effect of the loading mode and temperature on hydrogen embrittlement behavior of 15Cr for steam turbine last stage blade steel. **2022**, ○
- 54 Hydrogen-enhanced deformation twinning in Fe-Cr-Ni-based austenitic steel characterized by in-situ EBSD observation. **2023**, 105433 ○
- 53 Effects of High-Pressure Hydrogen Gas Exposure on the Residual Stress Fields and Cracks around Vickers Indentations. **2022**, 42, 1442-1448 ○
- 52 Interplay Between Hydrogen Atmosphere and Dislocation Characteristics (Core and Elastic Energies, Interaction Energy, and Character Angle) in BCC Fe from Time-Averaged Molecular Dynamics. ○
- 51 Hydrogen-induced degradation behavior of nickel alloy studied using acoustic emission technique. **2023**, 865, 144635 ○

- 50 Hydrogen-related with the change in mechanical properties and deformation behavior of 316L austenite stainless steel. **2023**, 197, 112666 ○
- 49 Hydrogen induced microstructure, mechanical properties and cracking evolution in a novel CoCrNiMo medium-entropy alloy. **2023**, 939, 168790 ○
- 48 Hydrogen in aluminum. **2013**, 63, 79-90 ○
- 47 Combined impact of elastic stress, prestrain and electrochemical charging on the hydrogen-induced cracking of high-strength steel. **2023**, ○
- 46 The dual role of hydrogen in grain boundary mobility. **2023**, 133, 045103 ○
- 45 Causes and effects of bearing damage. **2023**, 205-231 ○
- 44 Advancements in hydrogen energy research with the assistance of computational chemistry. **2023**, ○
- 43 Hydrogen-induced evolution associated with nano-scale precipitated phases in AlCoCrFeNi_{2.1} high-entropy alloy. **2023**, 944, 169116 ○
- 42 The Effect of Dew Point Control on Hydrogen Embrittlement of Al-Si Coated Hot-Stamping Components. **2023**, 84-91 ○
- 41 Synergistic effects of Nb and Mo on hydrogen-induced cracking of pipeline steels: A combined experimental and numerical study. **2023**, ○
- 40 In Situ X-ray Diffraction Investigation of Hydrogen Effects on Deformation-Induced Phase Transformation in Forged and Additively Manufactured 304L Stainless Steels. ○
- 39 Structure and mobility of ϵ -type screw dislocation in presence of H in ϵ -Ti from first-principles. **2023**, 250, 118842 ○
- 38 Synergistic effects of Ta and Mo on the hydrogen embrittlement resistance in ultra-high strength hot stamping steel. **2023**, 872, 144956 ○
- 37 Micro-mechanisms of deformation accommodation in AA7050 alloy in the presence of hydrogen. **2023**, 947, 169596 ○
- 36 Codes and standards for the fatigue-based design of hydrogen infrastructure components. **2023**, 171, 107564 ○
- 35 Effect of cathodic protection potential on stress corrosion susceptibility of X80 steel. **2023**, 218, 111184 ○
- 34 Effect of hydrogen on nanomechanical properties of Inconel 625 studied using in-situ electrochemical nanoindentation technique. **2023**, 948, 169742 ○
- 33 Microstructures and hydrogen embrittlement fracture mechanisms in 17-4PH martensitic stainless steel. **2022**, 42, 155-162 ○

- 32 Determination of hydrogen diffusibility and embrittlement susceptibility of high-strength steel evaluated at different temperatures based on the local equilibrium theory. **2023**, 246, 118725 ○
- 31 The hydrogen embrittlement of pure Ni fabricated by additive manufacturing. **2023**, ○
- 30 Hydrogen-assisted intergranular fatigue crack initiation in metals: Role of grain boundaries and triple junctions. **2023**, ○
- 29 Twenty years of the CoCrFeNiMn high-entropy alloy: achieving exceptional mechanical properties through microstructure engineering. **2023**, 23, 3362-3423 ○
- 28 Hydrogen embrittlement of 2205 duplex stainless steel in in-situ tensile tests. **2023**, 124, 103794 ○
- 27 The effects of hydrogen on dynamic fracture toughness of high-strength low-carbon medium manganese steel. **2023**, 124, 103806 ○
- 26 Recommended books. **2020**, 249-252 ○
- 25 Preface. **2020**, xv-xviii ○
- 24 Hydrogen Transport in Framework of Linear Non-Equilibrium Thermodynamics Approach. **2023**, 321-330 ○
- 23 Crack growth behavior in air and hydrogen of iron-3% silicon single-crystal thin sheet. **2023**, ○
- 22 Study on the improving effect of Nb-V microalloying on the hydrogen induced delayed fracture property of 22MnB5 press hardened steel. **2023**, 227, 111763 ○
- 21 Antagonistic fatigue crack propagation in Ni-based superalloy 718 under hydrogen-supply: Acceleration and deceleration phenomena. ○
- 20 In situ scanning electron microscopy of hydrogen embrittlement by near atmospheric-pressure hydrogen microplasma jet. **2023**, 94, 023707 ○
- 19 Hydrogen-Induced Attractive Force Between Two Partial of Edge Dislocation in Nickel. **2023**, 90, ○
- 18 Overview of hydrogen-resistant alloys for high-pressure hydrogen environment: on the hydrogen energy structural materials. **2023**, 7, 99-115 ○
- 17 Effect of Slow Strain Rates on the Hydrogen Migration and Different Crack Propagation Modes in Pipeline Steel. ○
- 16 Investigation of Hydrogen Diffusion Profile of Different Metallic Materials for a Better Understanding of Hydrogen Embrittlement. ○
- 15 How Hydrogen Affects the Formation and Evolution of Persistent Slip Bands in High-Purity Iron. 2201932 ○

- 14 Comparison of crack initiation sites and main factors causing hydrogen embrittlement of tempered martensitic steels with different carbide precipitation states. **2023**, ○
- 13 Hydrogen transfer behavior and hydrogen affected zone formation of low alloy steel during thermoplastic deformation. **2023**, 316, 117958 ○
- 12 Modeling fatigue life and hydrogen embrittlement of bcc steel with unified mechanics theory. **2023**, ○
- 11 Enhancement of hydrogen embrittlement resistance in a Fe-18Mn-0.6C twinning induced plasticity steel by copper alloying. **2023**, 118888 ○
- 10 The Effect of Strain Rate on Hydrogen-Assisted Deformation Behavior and Microstructure in AISI 316L Austenitic Stainless Steel. **2023**, 16, 2983 ○
- 9 Hydrogen-induced intergranular cracking of pure nickel under various strain rates and temperatures in gaseous hydrogen environment. **2023**, 873, 145040 ○
- 8 A multi-scale diffusional-mechanically coupled model for super-elastic NiTi shape memory alloy wires in hydrogen-rich environment. **2023**, 103614 ○
- 7 Effects of CH₄ and CO on hydrogen embrittlement susceptibility of X80 pipeline steel in hydrogen blended natural gas. **2023**, ○
- 6 Quantitative tests revealing hydrogen-enhanced dislocation motion in Fe. ○
- 5 Transition between a nano-sized prismatic dislocation loop and vacancy cluster in Fe: An atomic scale study. **2023**, 225, 112195 ○
- 4 Enhancing the hydrogen embrittlement resistance with cementite/VC multiple precipitates in high-strength steel. **2023**, 145084 ○
- 3 In-situ measurement of hydrogen entry and hydrogen embrittlement of steel by atmospheric corrosion. **2023**, 219, 111212 ○
- 2 Antagonistic fatigue crack acceleration/deceleration phenomena in Ni-based superalloy 718 under hydrogen-supply. **2023**, 13, ○
- 1 Characterisation of stress corrosion durability and time-dependent performance of cable bolts in underground mine environments. **2023**, 150, 107292 ○